

PATENT COOPERATION TREATY

9/622396

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

RECEIVED
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TC COMM MAIL ROOM

Date of mailing: 10 September 1999 (10.09.99)	
International application No.: PCT/IT99/00040	Applicant's or agent's file reference: dagoPCT-1
International filing date: 19 February 1999 (19.02.99)	Priority date: 03 March 1998 (03.03.98)
Applicant: D'AGOSTINI, Giovanni	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:
14 July 1999 (14.07.99)☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer: J. Zahra Telephone No.: (41-22) 338.83.38
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09/622356

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference dagoPCT-1	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/IT 99/ 00040	International filing date (day/month/year) 19/02/1999	(Earliest) Priority Date (day/month/year) 03/03/1998
Applicant D'AGOSTINI ORGANIZZAZIONE S.R.L. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IT 99/00040

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 G06F17/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 349 368 A (TAKEDA KIMIHITO ET AL) 20 September 1994 see abstract; claims 1-8 see column 2, line 15 - line 26 see column 7, line 11 - column 9, line 49; figures 7-12 ---	1-8
A	EP 0 176 858 A (SHARP KK) 9 April 1986 see abstract; claims 1-5 see page 16, line 1 - page 29, line 6; figures 6-22 ---	1-8
A	US 5 257 187 A (SUZUKI HITOSHI ET AL) 26 October 1993 see abstract see column 3, line 1 - column 4, line 47; figures 4-6 --- -/--	1-8



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

3 May 1999

Date of mailing of the international search report

12/05/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Suendermann, R

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 101 349 A (TOKUUME YOSHIHIRO ET AL) 31 March 1992 see abstract see column 2, line 10 - column 25 ---	1-8
A	FR 2 659 461 A (KIS FRANCE SA ;CRASNIANSKI SERGE (FR)) 13 September 1991 see abstract ---	9-13
A	US 5 063 508 A (YAMADA YOSHIMI ET AL) 5 November 1991 see abstract see column 2, line 10 - line 25 -----	9-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IT 99/00040

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5349368	A	20-09-1994	JP 63106866 A DE 3751784 D DE 3751784 T EP 0265280 A	11-05-1988 30-05-1996 05-09-1996 27-04-1988
EP 0176858	A	09-04-1986	JP 61074069 A JP 1666728 C JP 3032105 B JP 61080358 A JP 1666729 C JP 3032106 B JP 61080362 A JP 61088367 A JP 61088368 A JP 61090268 A JP 61090269 A DE 3587009 A US 5220503 A	16-04-1986 29-05-1992 09-05-1991 23-04-1986 29-05-1992 09-05-1991 23-04-1986 06-05-1986 06-05-1986 08-05-1986 08-05-1986 04-03-1993 15-06-1993
US 5257187	A	26-10-1993	JP 5008466 B JP 63137365 A GB 2199431 A	02-02-1993 09-06-1988 06-07-1988
US 5101349	A	31-03-1992	JP 2240769 A DE 69031354 D DE 69031354 T EP 0388156 A	25-09-1990 09-10-1997 08-01-1998 19-09-1990
FR 2659461	A	13-09-1991	NONE	
US 5063508	A	05-11-1991	JP 2249064 A	04-10-1990

PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: AGOSTINI, G.
D' AGOSTINI-Organizzazione
Via G. Giusti 17
33100 UDINE
ITALIE

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year) 26.11.99	
Applicant's or agent's file reference dagoPCT-1	REPLY DUE within 3 month(s) from the above date of mailing
International application No. PCT/IT99/00040	International filing date (day/month/year) 19/02/1999
Priority date (day/month/year) 03/03/1998	
International Patent Classification (IPC) or both national classification and IPC G06F17/28	
Applicant D'AGOSTINI ORGANIZZAZIONE S.R.L. et al.	

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain document cited
 - VII ☐ Certain defects in the international application
 - VIII ☒ Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: **03/07/2000**.

Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer / Examiner Barraco, G Formalities officer (incl. extension of time limits) Kirby, K Telephone No. +49 89 2399 2687
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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

2.1. The application claims an invention using terms of high level of abstraction in the domain of computation linguistics.

The terms used neither have a generally recognized meaning in the field concerned nor their meaning can be derived without doubt from the application as a whole.

Not sufficient care has been had in precisising the definition of linguistic terms, which have been adopted in different ways in computation linguistics and which can give rise to doubtful and not deterministic (possibly not technical) meanings when not properly circumstantiated for the particular computational processing technique to be adopted.

In particular, the following expressions in the claims 1 appear of not clear meaning: " opt from.. to... " (line 14, page 26, claim 1), "eventual change of the operator" (line 27, page 26, claim 1) , "memorize a respective behaviour code" (line 2, page 27 of claim 1), "integrate... storage means.. of words" (line 4, page 27, claim 1).

The following analysis has been made for the processing to which the "input text to be translated" of claim 1 undergoes, this is a probable but not sure interpretation of the wording:

the text is, in a first stage of the translation process, **automatically** (i.e. by the computer system) compared with a stored dictionary of words and phrases and than, in a second stage, **interactively** (i.e. with the intervention of the operator) is presented to the user, who is put in condition to enter further information which is useful for the translation process.

has already been done

Such way of conducting the machine translation process is known in the art and is, in effect, treated in D1, which give also details on the ways of displaying in correspondence the texts with the translations and with the user-entered information, cf. D1: Abstract, claims 1 to 5 passage from line 1 of page 16 to line 6 of page 29 together with figures 6 to 22.

Therefore, the subject-matter of claim 1 and 18 , when interpreted in the above way, is even not new.

This is for the following translations

2.2. Also the subclaims, contain expressions of not clear meaning. Their subject-matter, when interpreted in the above way, do not seem to be able to convey inventive significance, since the features there defined are considered obvious operational features of the machine translation systems known in the art, as the one known from D1.

Re Item VIII

Certain observations on the international application

1. The documents D1 should have been identified in the description and the relevant background art disclosed should have been briefly discussed, in accordance with the requirements of Rule 5.1(A)(ii) PCT.
2. Reference signs in parentheses should have been inserted in the claims to increase their intelligibility, Rule 6.2(B) PCT. This applies to both the preamble and characterising portion.
3. In order to expedite further examination you are requested to indicate with your reply the location/s/ in the application as originally filed of the passage/s/ forming a basis for the amendments and to furnish a complete list of the application pages to be examined.

WRITTEN OPINION
SEPARATE SHEET

International application No. PCT/IT99/00040

The examination is being carried out on the following application documents:

Text for the Contracting States:

AT BE CH DE DK ES FI FR GB GR IT IE LI LU MC NL PT SE

Description, pages:

1-25 as originally filed

Claims, No.:

1-12 as originally filed

Drawings, sheets:

1/7-7/7 as originally filed

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: EP-A-0 176 858 (SHARP KK) 9 April 1986

2. The wording of claims appear not clear and also the dependencies of claims appear not clear.

WRITTEN OPINION

International application No. PCT/IT99/00040

I. Basis of the opinion

1. This opinion has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".)*

Description, pages:

1-25 as originally filed

Claims, No.:

1-12 as originally filed

Drawings, sheets:

1/7-7/7 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1 no
Inventive step (IS)	Claims 2-25 no
Industrial applicability (IA)	Claims

2. Citations and explanations

see separate sheet

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/IT 99/00040

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 349 368 A (TAKEDA KIMIHITO ET AL) 20 September 1994 see abstract; claims 1-8 see column 2, line 15 - line 26 see column 7, line 11 - column 9, line 49; figures 7-12	1-8
A	EP 0 176 858 A (SHARP KK) 9 April 1986 see abstract; claims 1-5 see page 16, line 1 - page 29, line 6; figures 6-22	1-8
A	US 5 257 187 A (SUZUKI HITOSHI ET AL) 26 October 1993 see abstract see column 3, line 1 - column 4, line 47; figures 4-6	1-8

-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

3 May 1999

Date of mailing of the international search report

12/05/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Suendermann, R

INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/IT 99/00040

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 101 349 A (TOKUUME YOSHIHIRO ET AL) 31 March 1992 see abstract see column 2, line 10 - column 25	1-8
A	FR 2 659 461 A (KIS FRANCE SA ;CRASNIANSKI SERGE (FR)) 13 September 1991 see abstract	9-13
A	US 5 063 508 A (YAMADA YOSHIMI ET AL) 5 November 1991 see abstract see column 2, line 10 - line 25	9-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

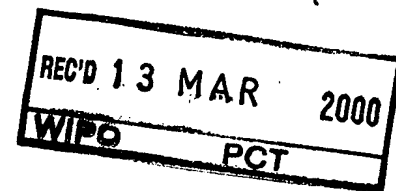
International Application No

PCT/IT 99/00040

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5349368	A	20-09-1994	JP 63106866 A	11-05-1988
			DE 3751784 D	30-05-1996
			DE 3751784 T	05-09-1996
			EP 0265280 A	27-04-1988
EP 0176858	A	09-04-1986	JP 61074069 A	16-04-1986
			JP 1666728 C	29-05-1992
			JP 3032105 B	09-05-1991
			JP 61080358 A	23-04-1986
			JP 1666729 C	29-05-1992
			JP 3032106 B	09-05-1991
			JP 61080362 A	23-04-1986
			JP 61088367 A	06-05-1986
			JP 61088368 A	06-05-1986
			JP 61090268 A	08-05-1986
			JP 61090269 A	08-05-1986
			DE 3587009 A	04-03-1993
			US 5220503 A	15-06-1993
US 5257187	A	26-10-1993	JP 5008466 B	02-02-1993
			JP 63137365 A	09-06-1988
			GB 2199431 A	06-07-1988
US 5101349	A	31-03-1992	JP 2240769 A	25-09-1990
			DE 69031354 D	09-10-1997
			DE 69031354 T	08-01-1998
			EP 0388156 A	19-09-1990
FR 2659461	A	13-09-1991	NONE	
US 5063508	A	05-11-1991	JP 2249064 A	04-10-1990

PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference dagoPCT-1		FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IT99/00040	International filing date (day/month/year) 19/02/1999	Priority date (day/month/year) 03/03/1998	
International Patent Classification (IPC) or national classification and IPC G06F17/28			
Applicant D'AGOSTINI ORGANIZZAZIONE S.R.L. et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 14/07/1999	Date of completion of this report 09.03.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Barraco, G Telephone No. +49 89 2399 2172 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IT99/00040

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-11, 15-25	as originally filed			
12-14	as received on	07/12/1999	with letter of	03/12/1999

Claims, No.:

4 (part), 5-13	as originally filed			
1-3, 4 (part)	as received on	07/12/1999	with letter of	03/12/1999

Drawings, sheets:

1/7-7/7	as originally filed
---------	---------------------

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IT99/00040

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-13
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-13
Industrial applicability (IA)	Yes:	Claims	1-13
	No:	Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IT99/00040

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The following document (D) is referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: EP-A-0 176 858 (SHARP KK) 9 April 1986

2. The wording of claims appear not clear and also the dependencies of claims appear not clear, cf. claim 11.

2.1. The application claims an invention using terms of high level of abstraction in the domain of computation linguistics.

The terms used neither have a generally recognized meaning in the field concerned nor their meaning can be derived without doubt from the application as a whole.

Not sufficient care has been had in precisising the definition of linguistic terms, which have been adopted in different ways in computation linguistics and which can give rise to doubtful and not deterministic (possibly not technical) meanings when not properly circumstantiated for the particular computational processing technique to be adopted.

In particular, the following expressions in the claims 1 appear of not clear meaning :

" opt from.. to... " (line 14, page 26, claim 1),

" memorize a respective behaviour code" (line 2, page 27, claim 1).

The following analysis has been made for the processing to which the " input text to be translated" of claim 1 undergoes, this is a probable but not sure interpretation of the wording:

the text is, in a first stage of the translation process, **automatically** (i.e. by the computer system) compared with a stored dictionary of words and phrases and than, in a second stage, **interactively** (i.e. with human interventions) is presented to the user, who is put in condition to enter further information which is useful for the translation process of the **entire** source text.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IT99/00040

Such technique of conducting the machine translation process is known in the art and is, in effect, treated in D1, which gives also details on the ways of displaying in correspondence the texts with the translations and with the user-entered information, cf. D1: Abstract, claims 1 to 5 and passage from line 1 of page 16 to line 6 of page 29 together with figures 6 to 22.

Therefore, the subject-matter of a clarified independent claim implementing said known technique and equivalent to claim 1, when interpreted in the above way, is not inventive and does not satisfy the condition set forth in Article 33(3) PCT.

2.2. Also the subclaims 2 to 13, contain expressions of not clear meaning.

However, their subject-matter, when interpreted in the light of the above explanation for claim 1, do not seem to be able to convey inventive significance, since the features there defined are considered obvious operational features of the machine translation systems known in the art, as the one known from D1.

M O T . 1 2 . 9 9

12

1 means for displaying the source language document on the translation
2 screen portion;

3 means for comparing each of the plurality of source terms from the
4 product glossary with the source terms in the source language document;

5 inserting means for inserting a character adjacent to the source term
6 in the source language document, in response to each comparison by the
7 comparing means which produces a match between one of the source terms
8 in the source language document and one of the source terms in the product
9 glossary;

10 means for associating in an index file the inserted character with a
11 target term from the product glossary that translates the matched source
12 term from the source language into the target language;

13 means for inputting an insert target term command which contains a
14 translation request character corresponding to the inserted character;

15 means for retrieving the translation request character from the insert
16 target term command;

17 means for retrieving from the index file the target term associated with
18 the retrieved translation request character; and

19 means for inserting the retrieved target term on the translation screen
20 portion in response to the insert target term command.

21 **EP-A-0176858(SHARP KK) April 1986, discloses:**

22 **A translation system performing translation from a first language**
23 **into second language under an interaction mode between said**
24 **translation system and an operator, comprising means for**
25 **inputting original sentence to be translated, means for translating**
26 **the input sentence of said first language into output sentence of**
27 **said second language, wherein the operator inputs information**
28 **relating to at least one word of the input sentence then the**
29 **translation is performed on the basis of said input information.**

30 Prior art drawbacks

31 The prior art drawbacks substantially consist in that they do not allow
32 the operator to reach a suitable operational performance, even in the
33 latter EP-A-0176858(SHARP KK) solution, the operator identifies
34 first the qualification of input sentence word/s, then translation is
35 performed.

36 Purpose of the present invention

NOV 12 1999

13

1 Purpose of the present invention is that of obviating the above
2 mentioned drawbacks.

3 Essence of the invention

4 The problem is solved as claimed by a machine translation system and
5 respective translator which comprises such system, of the type in which the
6 set-up of:

- 7 - first means for the storing of words and strings with more words with
- 8 respective correct translations forming a dictionary of words and sentences
- 9 or sentence portions;
- 10 - second means for receiving a text to be translated on a screen field and
- 11 - third means for storing the translated text into a second screen field;
- 12 - fourth means for progressively searching the words of the text to be
- 13 translated and comparing them with said first means words for obtaining a
- 14 progressive translation; and
- 15 - means for having an option between a completely automatic form of
- 16 translation or an interactive one or vice versa before beginning the
- 17 translation, in which, during said interactive translation option, are additionally
- 18 provided:
- 19 - means for displaying on a disappearing window on said screen:
- 20 - the words missing during the word search and
- 21 - the sentences translated when each sentence translation is complete; and
- 22 allow their correction and storage;
- 23 characterized in that, ~~during~~ in said interactive translation option **the**
- 24 **following** are additionally provided:
- 25 • means for highlighting and storing a translated sentence word or portion,
- 26 concerning a ~~possible~~ modification by the operator and

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- 1 • means for highlighting and storing the corresponding ~~translated~~ sentence,
2 word or portion **to be translated**,
3 • means for storing a respective behaviour code of **the modification** of said
4 sentence, word or portion;
5 • for integrating said first storage means **with them** forming a dictionary of
6 words and sentences or sentence portions **for self-modification in the next**
7 **sentences to be translated**.

8 Advantages of the new solution

9 In this way there is the advantage of giving the operator the possibility
10 of progressively implementing during the same translation not only the missing
11 words or the repetitive and common sentences as in the prior art known
12 systems, but also sentence fragments, which thanks to the respective
13 behaviour code given by the operator will be inserted and suitably be self-
14 modified in the next translation sentence.

15 Thus, thanks to the well known repetitiveness of the expressions in the
16 translation documents, the system automatically and rapidly ~~suits~~ **continues**
17 ~~to the~~ **this** new translation ~~field~~ **domain** giving, after the first translated text
18 ~~pieces~~ **modifications**, thanks to said auto-learning of corrections (**FM 1 -**
19 **FM2, FM3**) with said behaviour code (**FM4**) , a resulting maximum
20 translation level and absolutely peerless in quality respect to any known
21 translation system.

22 The tests carried out gave such amazing results that even after only a little
23 translation the errors in each sentence decrease to the minimum almost
24 immediately reaching the average error/sentence value comprised between 1
25 and 2, for then reaching the error/sentences value >1.

26 Preferential variations

27 The presence of ~~of~~ the following is additionally provided :

28 **AA.** Means which provide at least three control and input lines: .

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26

Claims

1. A Machine translation system using a computer translator of the type in which is provided the prearrangement of:

- first storage means of words and strings of more words with respective correct translations forming a dictionary of words and sentences or sentence portions;

- second means to receive and store a text to be translated in a screen field or second storing means (4-45-455) and

- third means to store the translated text in a second screen field or third storing means (456);

- fourth means to find in progression the words of the text to be translated and compare them with the words of said first means to obtain a progressive translation and:

- means to opt from a completely automatic kind of translation to an interactive translation or vice versa, before beginning the translation, in which :

during said interactive translation option, the following are further provided:

- means to display in a display window (46) on said screen (4):

- the words lacking during the research of the words and

- the translated sentences at the completion of the translation of each sentence; and allow their correction and storage;

characterised in that, ~~during~~ **in** said interactive translation option, the following are further provided:

- means to highlight (F2) and store a translated word or sentence portion (4631), concerning ~~an eventual change~~ **modification** by the operator and

- means to highlight and store the corresponding word or sentence

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27

- 1 portion (F4-4621) of the sentence to be translated (462), and
- 2 - means to memorize a respective behaviour code (F5-4632) **of the**
- 3 **modification** of said translated word or sentence portion (4631);
- 4 to integrate said first storage means **with them**
- 5 **(4621,4631,4632)**, forming a dictionary of words and sentences or
- 6 sentence portions (FM; FM1,FM2,FM3,FM4,FM5) **for self-**
- 7 **modification in the next sentences to be translated.**
- 8 2. Translation system according to claim 1. characterised in that in
- 9 said interactive window (46) at least three sentences
- 10 lines/fragments or control and input strings are provided:
- 11 - the first as a fragment (4621) of the sentence to be translated
- 12 (462) corresponding to the correction made (4631);
- 13 - the second as a portion concerning the correction of the translated
- 14 sentence (4631);
- 15 - the third as behaviour code (4632) corresponding to the portion
- 16 concerning the correction (4631).
- 17 3. Translation system according to any of the preceding claims where
- 18 in said interactive window (46), a line representing a series of
- 19 numbers (461) is further provided, in which the number are
- 20 represented in logic succession, with:
- 21 - traits of single words translation $(1*n) +$
- 22 - traits of words sets translation $(n)+$.
- 23 4. Translation system according to any of the preceding claims,
- 24 characterised in that it includes a translation interface (45) that
- 25 includes at least two fields (455-456) vertically scrollable in parallel
- 26 (4511-4561); adjacent and placed side-by-side, one for the document
- 27 to be translated (455) and one for the translation (456), being
- 28 provided means that:
- 29 - allow the contemporary variation of both fields dimension, one for
- 30 the text to be translated and one for the translated text, and

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ART 34 AMOT

1 means for displaying the source language document on the
2 translation screen portion;

3 means for comparing each of the plurality of source terms
4 from the product glossary with the source terms in the source
5 language document;

6 inserting means for inserting a character adjacent to the
7 source term in the source language document, in response to each
8 comparison by the comparing means which produces a match
9 between one of the source terms in the source language document
10 and one of the source terms in the product glossary;

11 means for associating in an index file the inserted character
12 with a target term from the product glossary that translates the
13 matched source term from the source language into the target
14 language;

15 means for inputting an insert target term command which
16 contains a translation request character corresponding to the
17 inserted character;

18 means for retrieving the translation request character from
19 the insert target term command;

20 means for retrieving from the index file the target term
21 associated with the retrieved translation request character; and

22 means for inserting the retrieved target term on the
23 translation screen portion in response to the insert target term
24 command.

25 Prior art drawbacks

26 The prior art drawbacks substantially consist in that they do
27 not allow the operator to reach a suitable operational performance.

28 Purpose of the present invention

1 Purpose of the present invention is that of obviating the
2 above mentioned drawbacks.

3 Essence of the invention

4 The problem is solved as claimed by a machine translation
5 system and respective translator which comprises such system, of
6 the type in which the set-up of:

- 7 - first means for the storing of words and strings with more words
8 with respective correct translations forming a dictionary of words
9 and sentences or sentence portions;
- 10 - second means for receiving a text to be translated on a screen
11 field and
- 12 - third means for storing the translated text into a second screen
13 field;
- 14 - fourth means for progressively searching the words of the text to
15 be translated and comparing them with said first means words for
16 obtaining a progressive translation; and
- 17 - means for having an option between a completely automatic form
18 of translation or an interactive one or vice versa before beginning
19 the translation, in which, during said interactive translation
20 option, are additionally provided:
 - 21 - means for displaying on a disappearing window on said screen:
 - 22 - the words missing during the word search and
 - 23 - the sentences translated when each sentence translation is
24 complete; and allow their correction and storage;
- 25 characterized in that, during said interactive translation option are
26 additionally provided:
 - 27 • means for highlighting and storing a translated sentence word or
28 portion, concerning a possible modification by the operator and

- 1 • means for highlighting and storing the corresponding translated
- 2 sentence word or portion,
- 3 • means for storing a respective behaviour code of said sentence
- 4 word or portion;
- 5 • for integrating said first storage means forming a dictionary of
- 6 words and sentences or sentence portions.

7 **Advantages of the new solution**

8 In this way there is the advantage of giving the operator the
9 possibility of progressively implementing during the same
10 translation not only the missing words or the repetitive and
11 common sentences as in the prior art known systems, but also
12 sentence fragments, which thanks to the respective behaviour
13 code given by the operator will be inserted and suitably be self-
14 modified in the next translation sentence.

15 Thus, thanks to the well known repetitiveness of the expressions in
16 the translation documents, the system automatically and rapidly
17 suits to the new translation field giving, after the first translated
18 text pieces, a resulting maximum translation level and absolutely
19 peerless in quality respect to any known translation system.

20 The tests carried out gave such amazing results that even after only
21 a little translation the errors in each sentence decrease to the
22 minimum almost immediately reaching the average
23 error/sentence value comprised between 1 and 2, for then
24 reaching the error/sentences value >1 .

25 **Preferential variations**

26 The presence of of the following is additionally provided :

27 A A. Means which provide at least three control and input
28 lines:

Claims

1. A Machine translation system using a computer translator of the type in which is provided the prearrangement of:

- first storage means of words and strings of more words with respective correct translations forming a dictionary of words and sentences or sentence portions;
- second means to receive and store a text to be translated in a screen field or second storing means (4-45-455) and
- third means to store the translated text in a second screen field or third storing means (456);
- fourth means to find in progression the words of the text to be translated and compare them with the words of said first means to obtain a progressive translation and:
- means to opt from a completely automatic kind of translation to an interactive translation or vice versa, before beginning the translation,

in which :

during said interactive translation option, the following are further provided:

- means to display in a display window (46) on said screen (4):
- the words lacking during the research of the words and
- the translated sentences at the completion of the translation of each sentence; and allow their correction and storage;

characterised in that, during said interactive translation option, the following are further provided:

- means to highlight (F2) and store a translated word or sentence portion (4631), concerning an eventual change of the operator and
- means to highlight and store the corresponding word or sentence

- 1 portion (F4-4621) of the sentence to be translated (462), and
2 - means to memorize a respective behaviour code (F5-4632) of said
3 translated word or sentence portion (4631);
4 to integrate said first storage means forming a dictionary of words
5 and sentences or sentence portions (FM; FM1,FM2,FM3,FM4,FM5).
- 6 2. Translation system according to claim 1. characterised in that in
7 said interactive window (46) at least three sentences
8 lines/fragments or control and input strings are provided:
9 - the first as a fragment (4621) of the sentence to be translated
10 (462) corresponding to the correction made (4631);
11 - the second as a portion concerning the correction of the
12 translated sentence (4631);
13 - the third as behaviour code (4632) corresponding to the portion
14 concerning the correction (4631).
- 15 3. Translation system according to any of the preceding claims
16 where in said interactive window (46), a line representing a series
17 of numbers (461) is further provided, in which the number are
18 represented in logic succession, with:
19 - traits of single words translation (1*n) +
20 - traits of words sets translation (n)+.
- 21 4. Translation system according to any of the preceding claims,
22 characterised in that it includes a translation interface (45) that
23 includes at least two fields (455-456) vertically scrollable in
24 parallel (4511-4561); adjacent and placed side-by-side, one for the
25 document to be translated (455) and one for the translation (456),
26 being provided means that:
27 - allow the contemporary variation of both fields dimension, one
28 for the text to be translated and one for the translated text, and

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REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum) d a g o P C T - 1

Box No. I TITLE OF INVENTION

A TRANSLATION SYSTEM AND A MULTIFUNCTION COMPUTER, PARTICULARLY FOR TREATING TEXTS AND TRANSLATION ON PAPER

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

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Italy

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Facsimile No.

Teleprinter No.

State (that is, country) of nationality: ITALY

State (that is, country) of residence: ITALY

This person is applicant for the purposes of:

☐ all designated States

☒ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

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Italy

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: Italy

State (that is, country) of residence: Italy

This person is applicant for the purposes of:

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☐ all designated States except the United States of America

☒ the United States of America only

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☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

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☒ agent

☐ common representative

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INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/IT 99/00040

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 349 368 A (TAKEDA KIMIHITO ET AL) 20 September 1994 see abstract; claims 1-8 see column 2, line 15 - line 26 see column 7, line 11 - column 9, line 49; figures 7-12	1-8
A	EP 0 176 858 A (SHARP KK) 9 April 1986 see abstract; claims 1-5 see page 16, line 1 - page 29, line 6; figures 6-22	1-8
A	US 5 257 187 A (SUZUKI HITOSHI ET AL) 26 October 1993 see abstract see column 3, line 1 - column 4, line 47; figures 4-6	1-8
-/--		

☒ Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search

3 May 1999

Date of mailing of the international search report

12/05/1999

Name and mailing address of the ISA

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Suendermann, R

INTERNATIONAL SEARCH REPORT

Intern 1st Application No

PCT/IT 99/00040

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 101 349 A (TOKUUME YOSHIHIRO ET AL) 31 March 1992 see abstract see column 2, line 10 - column 25	1-8
A	FR 2 659 461 A (KIS FRANCE SA ; CRASNIANSKI SERGE (FR)) 13 September 1991 see abstract	9-13
A	US 5 063 508 A (YAMADA YOSHIMI ET AL) 5 November 1991 see abstract see column 2, line 10 - line 25	9-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IT 99/00040

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5349368	A	20-09-1994	JP 63106866 A	11-05-1988
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			EP 0265280 A	27-04-1988
EP 0176858	A	09-04-1986	JP 61074069 A	16-04-1986
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			DE 69031354 T	08-01-1998
			EP 0388156 A	19-09-1990
FR 2659461	A	13-09-1991	NONE	
US 5063508	A	05-11-1991	JP 2249064 A	04-10-1990

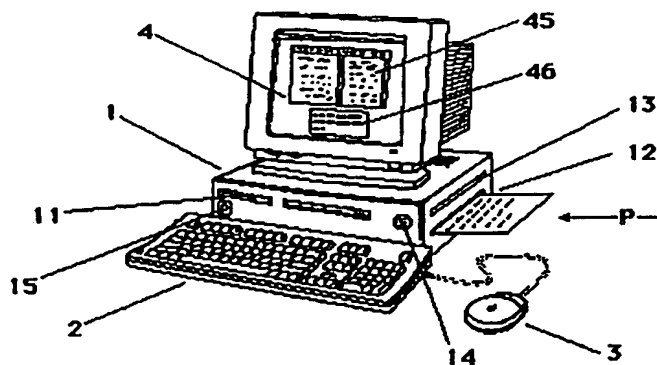
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G06F 17/28	A1	(11) International Publication Number: WO 99/45476 (43) International Publication Date: 10 September 1999 (10.09.99)
(21) International Application Number: PCT/IT99/00040 (22) International Filing Date: 19 February 1999 (19.02.99) (30) Priority Data: UD98A000032 3 March 1998 (03.03.98) IT (71) Applicant (for all designated States except US): D'AGOSTINI ORGANIZZAZIONE S.R.L. [IT/IT]; Via G. Giusti, 17, I-33100 Udine (IT). (72) Inventor; and (75) Inventor/Applicant (for US only): D'AGOSTINI, Giovanni [IT/IT]; Via G. Giusti, 17, I-33100 Udine (IT). (74) Agent: D'AGOSTINI, Giovanni; D'Agostini Organizzazione s.r.l., Via G. Giusti, 17, I-33100 Udine (IT).		(81) Designated States: AU, BR, CA, CN, CU, JP, MX, RU, US, VN, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: A TRANSLATION SYSTEM AND A MULTIFUNCTION COMPUTER, PARTICULARLY FOR TREATING TEXTS AND TRANSLATION ON PAPER		



(57) Abstract

Computer for text treatment and machine translation system and translator, of the type in which the prearrangement is provided: first means for storing words and strings of more words with respective correct translations forming a dictionary of words and sentences or sentence portions; second means for receiving a text to be translated in a screen field (4-45-455); and third means for storing the translated text in a second screen field (456); fourth means for searching in progression the words of the text to be translated and compare them with the words of said first means to obtain a progressive translation and: means to opt from a completely automatic translation form to an interactive translation or vice versa, before beginning the translation, in which, during said option of interactive translation, are further provided: means to display in a disappearing window (46) on said screen (4); the words lacking during the research of the words and the translated sentences at the completion of the translation of each sentence; and allow the correction and storage; the translation apparatus involving a scanner integrated in it with OCR for the side direct loading of the sheets to be translated (P-12-13).

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EE	Estonia	LR	Liberia	SG	Singapore		

DESCRIPTION

A TRANSLATION SYSTEM AND A MULTIFUNCTION
COMPUTER, PARTICULARLY FOR TREATING TEXTS AND
TRANSLATION ON PAPER

Technical Field

This invention has for object a translation system and a multifunction computer, particularly for treating texts and translation on paper.

The translation system is also part of this invention.

Background Art

In prior art there is a great plurality of computers able to do translations and machine translation systems.

The most known ones are the following :

US-5677835 - Oct. 14, 1997 - in the name of Caterpillar Inc.,
Peoria, IL, USA

This substantially regards:

a system of integrated computer-based processes for monolingual information development and multilingual translation.

An interactive text editor enforces lexical and grammatical constraints on a natural language subset used by the authors to create their text, which they help disambiguate to ensure translatability.

The resulting translatable source language text undergoes machine translation into any one of a set of target languages, without the translated text requiring any post-editing.

US-5510981; Oct. 28, 1993; (International Business Machines Corporation, Armonk, NY), regards a language translation apparatus and method using

1 context-based translation models:

2 In particular:

3 An apparatus for translating a series of source words in a first
4 language to a series of target words in a second language. For an
5 input series of source words, at least two target hypotheses, each
6 including a series of target words, are generated.

7 Each target word has a context comprising at least one other word
8 in the target hypothesis.

9 For each target hypothesis, a language model match score
10 including an estimate of the probability of occurrence of the series
11 of words in the target hypothesis.

12 At least one alignment connecting each source word with at least
13 one target word in the target hypothesis is identified. For each
14 source word and each target hypothesis, a word match score
15 including an estimate of the conditional probability of occurrence
16 of the source word, given the target word in the target hypothesis
17 which is connected to the source word and given the context in the
18 target hypothesis of the target word which is connected to the
19 source word.

20 For each target hypothesis, a translation match score including a
21 combination of the word match scores for the target hypothesis
22 and the source words in the input series of source words.

23 A target hypothesis match score including a combination of the
24 language model match score for the target hypothesis and the
25 translation match score for the target hypothesis. The target
26 hypothesis having the best target hypothesis match score is output.

27 US-5384701 - June 7 , 1991 in the name of British
28 Telecommunications public limited company, London, England ,

1 regards a Language translation system, and in particular:

2 A language translation system for translating phrases from a first
3 language into a second language comprises a store holding a
4 collection of phrases in the second language.

5 Phrases input in the first language are each characterized on the
6 basis of one or more keywords, and the corresponding phrase in
7 the second language is output. Such a phrasebook approach
8 enables what is effectively a rapid and accurate translation, even
9 from speech.

10 Since the phrases in the second language are prepared in advance
11 and held in store, there need be no problems of poor translation or
12 ungrammatical construction.

13 The output may be in text, or, using speech synthesis, in voice
14 form. With appropriate choice of keywords it is possible to
15 characterize a large number of relatively long and complex
16 phrases with just a few keywords.

17 US-5338976 - June 16, 1992, in the name of Ricoh Company,
18 Ltd., Tokyo, Japan, regards an Interactive language conversion
19 system; and in particular:

20 a language conversion system includes a database of expression
21 patterns in the object language, a relevance evaluation mechanism
22 for evaluating a relevance of each expression patterns in the
23 object language with respect to an input in the original language,
24 a retrieval and identification mechanism for retrieving and
25 identifying from the input in the original language information
26 requested by the expression pattern in the object language
27 required to generate an output in the object language, a selection
28 mechanism for selecting the expression pattern in the object

1 language conforming to the input in the original language
2 depending on the relevance evaluated in the relevance evaluation
3 mechanism, an output mechanism for generating the output in the
4 object language based on the required information retrieved and
5 identified from the input in the original language by the retrieval
6 and identification mechanism, and a control mechanism for
7 controlling operation sequences of the relevance evaluation
8 mechanism, the retrieval and identification mechanism, the
9 selection mechanism and the output mechanism.

10 **US-5659765** : Machine translation system in the name of
11 Toppan Printing Co., Ltd., Tokyo, Japan, filed on March 14, 1995,
12 claims :

13 A machine translation system comprising:

- 14 - a first language;
- 15 - second input means for inputting a second character string
16 written in a second language;
- 17 - display means for simultaneously displaying the first and second
18 character strings input from said first and second input means;
- 19 - linking means which has first designating means for designating
20 a third character string included in the first character
21 - string displayed by said display means, and second
22 designating means for designating a fourth character string
23 included in the second character string displayed by said display
24 means, and links the third and fourth character strings with each
25 other;
- 26 - recording means for recording the third and fourth character
27 strings linked by said linking means as a pair; and
- 28 - means for detecting the character string which is most similar to

1 an original character string written in the first language from a
2 plurality of recorded third character strings, and translating the
3 original character string into a character string written in the
4 second language by using a fourth character string linked with
5 the detected character string.

6 **US-5426583** - Jan. 27, 1994 - in the name of Uribe-
7 Echebarria Diaz De Mendibil; Gregorio, Erandio, Bilbao, Spain,
8 regards an Automatic interlingual translation system, claiming :
9 - a method for use in a computer to automatically translate a first
10 text based on a source language to a second text based on a different
11 target language, said method comprising the steps of:

12 (a) analyzing said first text to achieve an arborescent-type
13 clarification on morphological, syntactical and semantic
14 characteristics of said first text;

15 (b) translating the analyzed text to a first intermediate
16 language, wherein said first intermediate language contains
17 structural characteristics of said source language;

18 (c) integrating the translated text into an interlingua,
19 wherein said interlingua contains morphological,
20 syntactical, and semantic features of a plurality of languages;

21 (d) translating the integrated text to a second intermediate
22 language, wherein said second intermediate language contains
23 structural characteristics of said target language; and

24 (e) converting the translated, integrated text to said second
25 text.

26 **US-4604698** - Dec. 22, 1983 - in the name of Sharp Kabushiki
27 Kaisha, Osaka, Japan, regards an Electronic translator including
28 character input keys for inputting a first language word, a

1 translator for translating the inputted first language word into the
2 second language word, a retranslator for retranslating the second
3 language word back to the first language word, and a display unit
4 for displaying the inputted word, translated word and retranslated
5 word.

6 **US-4439836** Oct.- 22, 1980 - in the name of Sharp Kabushiki
7 Kaisha, Osaka, Japan, regards an Electronic translator, claiming:
8 an electronic translator device for obtaining a second word
9 represented in a second language equivalent to an input word in a
10 first language, comprising:

11 input means for entering the input word;

12 first memory means for memorizing a plurality of first
13 words in the first language, each of said first words

14 comprising one or more first letters which remain
15 unchanged regardless of inflection and one or more second letters
16 which change according to inflection;

17 address means operatively connected to said input means and
18 responsive to entry of the input word for addressing

19 said first memory means to develop one of the plurality of
20 first words;

21 detection means operatively connected to said first memory
22 means and responsive to said address means for

23 detecting equivalency between the input word and said first
24 letters of respective first words;

25 second memory means for memorizing a plurality of second
26 words in the second language corresponding to first

27 words stored in said first memory means;

28 first means operatively connected to said detecting means

1 for activating said second memory means whereby said
2 second memory means develops a second word
3 corresponding to the input word when the input word is equivalent
4 to one of said first words; and

5 second means operatively connected to said detecting means
6 for indicating that one of said first words in said first memory
7 means comprises a noninflected form of the input word.

8 US-4633435 - July 22, 1985 - in the name of Sharp
9 Kabushiki Kaisha, Osaka, Japan, regards an Electronic language
10 translator capable of modifying definite articles, and in particular
11 regarding an electronic translator is featured in which sentences
12 as stored are modified by replacing one or more words in one of the
13 original sentences with one or more new words and by changing
14 automatically one or more additional words in the original
15 sentence, depending on the nature of the one or more new words
16 entered in the sentence. For example, the one or more additional
17 words may be definite articles or prepositions.

18 US-4831529 - Feb. 12, 1987 - in the name of Kabushiki
19 Kaisha Toshiba, Kawasaki, Japan, regards a Machine translation
20 system, claiming:

21 a machine translation system for translating a first language into a
22 second language, which comprises:

23 input means for entry of an original written sentence in the
24 first language into the system;

25 dictionary means having at least a first dictionary for
26 storing various words in various parts of speech and their

27 translation in the second language respectively
28 corresponding to the words in the first language, and a second

1 dictionary for storing various words designated as nouns
2 corresponding to words in the first language;

3 translation means for analyzing the original written
4 sentence in the first language, for retrieving said dictionary
5 means and for executing the translation processing of the input
6 original, when any same word designated as nouns stored in the
7 first dictionary is found in the second dictionary, the word stored
8 in the second dictionary takes precedence over that in the first
9 dictionary in the translation means; and

10 output means for producing translated sentences in the
11 second language obtained from said translation means.

12 US-5020021 - Jan. 10, 1986 - in the name of Hitachi, Ltd.,
13 Tokyo, Japan, regards a system for automatic language translation
14 using several dictionary storage areas and a noun table, and in
15 particular regarding a translation method for a machine
16 translation system provided with apparatus for parsing a source
17 language sentence and for forming a target language translation
18 in which a phrase omitted in the source language sentence is
19 identified, and a word or phrase to be inserted for the omitted
20 phrase is selected from stored words and phrases. For identifying
21 an omitted phrase, a sentence pattern corresponding to a predicate
22 in the source language sentence is formed so as to include not only
23 cases governed by the predicate but also a semantic feature for
24 each case. By comparing the source language sentence with the
25 sentence pattern, a case which is omitted in the source language
26 sentence but cannot be omitted in the target language translation
27 is identified. For determining a word or phrase to be placed at the
28 position of the omitted phrase, the nouns having appeared in the

1 source language text is stored in a noun, together with the
2 semantic feature, gender, person and number of each noun is
3 searched for a noun having the same semantic feature as the
4 omitted phrase. When a target language translation of the source
5 language sentence is formed, a pronoun having the same gender,
6 person and number as the omitted phrase is used as a target
7 language equivalent for the omitted phrase, and thus a target
8 language translation which is grammatically correct, is obtained.

9 US-5093788 - June 25, 1987 - in the name of Sharp
10 Kabushiki Kaisha, Osaka, Japan, regards a Translation machine
11 system with splitting and combining of sentences.

12 Same claims an electronic translation machine system for
13 translating multiple sentences from a source language to a target
14 language comprising:

15 input means for inputting a plurality of source sentences;

16 first buffer means in communication with said input means
17 for storing said source sentences;

18 position designation means coupled with said first buffer
19 means for designating a division point separating a selected

20 source sentence into parts and for inserting a position
21 designation symbol in said selected source sentence;

22 splitting means in communication with said first buffer
23 means for scanning said selected source sentence for said

24 position designation symbol and, once encountered, for
25 splitting said selected source sentence into parts and for

26 storing said parts in said first buffer means; and translation

27 means for translating the parts of said selected source sentence

28 stored in said buffer means from said source language to said target

1 language.

2 US-5175684 - Dec. 31, 1990 - in the name of Trans-Link
3 International Corp., Honolulu, HI, regards an Automatic text
4 translation and routing system, claiming:
5 - a machine translation system comprising:

6 a machine translation module which is capable of
7 performing machine translation from input text of a source
8 language to output text of a target language, said machine
9 translation module having a plurality of target language
10 submodules for performing machine translation into a plurality of
11 different target languages;

12 a receiving interface for receiving via a first
13 telecommunications link an electronic input which is divided into
14 pages,

15 said input pages including a cover page having predefined
16 fields containing system information therein and at least one text
17 page in a source language, wherein said cover page includes at
18 least a first predefined field designating an address of an addressee
19 to which translated output text is to be sent, and a second
20 predefined field designating a selected one of the plurality of
21 different target languages into which the at least one text page is to
22 be translated, and

23 wherein said receiving interface includes a recognition
24 module capable of electronically recognizing the address of the
25 addressee designated in said first predefined field of the cover page
26 of the received input pages, and the selected target language
27 designated in said second predefined field of the cover page;

28 a sending interface for sending output text generated by said

1 machine translation module to an addressee via a second
2 telecommunications link; and

3 control means coupled to said receiving interface, said
4 machine translation module, and said sending interface for
5 recognizing the address and target language designated in said
6 predefined fields of said cover page, for controlling said machine
7 translation module to generate output text of the designated target
8 language from the input text of the source language, and for
9 operating said sending interface to automatically send the
10 translated output text via the second telecommunications link to the
11 designated address recognized from said predefined fields of said
12 cover page.

13 US-5303151 - Feb. 26, 1993 - in the name of Microsoft
14 Corporation, Redmond, WA, regards a Method and system for
15 translating documents using translation, and claiming:
16 - a computer system for translating a source language document
17 written in a source language to a target language document written
18 in a target language, the source language including a multiplicity
19 of source terms and the target language including a multiplicity of
20 target terms, the computer system including a display screen, the
21 source language document, a product glossary having a plurality of
22 source terms from the source language and a plurality of target
23 terms from the target language, each source term being associated
24 with the corresponding target term which translates the source
25 term into the target language, the computer system comprising:

26 means for producing a translation screen portion on the
27 display screen, the translation screen portion including a current
28 insertion point;

1 means for displaying the source language document on the
2 translation screen portion;

3 means for comparing each of the plurality of source terms
4 from the product glossary with the source terms in the source
5 language document;

6 inserting means for inserting a character adjacent to the
7 source term in the source language document, in response to each
8 comparison by the comparing means which produces a match
9 between one of the source terms in the source language document
10 and one of the source terms in the product glossary;

11 means for associating in an index file the inserted character
12 with a target term from the product glossary that translates the
13 matched source term from the source language into the target
14 language;

15 means for inputting an insert target term command which
16 contains a translation request character corresponding to the
17 inserted character;

18 means for retrieving the translation request character from
19 the insert target term command;

20 means for retrieving from the index file the target term
21 associated with the retrieved translation request character; and

22 means for inserting the retrieved target term on the
23 translation screen portion in response to the insert target term
24 command.

25 **Prior art drawbacks**

26 The prior art drawbacks substantially consist in that they do
27 not allow the operator to reach a suitable operational performance.

28 **Purpose of the present invention**

1 Purpose of the present invention is that of obviating the
2 above mentioned drawbacks.

3 **Essence of the invention**

4 The problem is solved as claimed by a machine translation
5 system and respective translator which comprises such system, of
6 the type in which the set-up of:

- 7 - first means for the storing of words and strings with more words
8 with respective correct translations forming a dictionary of words
9 and sentences or sentence portions;
- 10 - second means for receiving a text to be translated on a screen
11 field and
- 12 - third means for storing the translated text into a second screen
13 field;
- 14 - fourth means for progressively searching the words of the text to
15 be translated and comparing them with said first means words for
16 obtaining a progressive translation; and
- 17 - means for having an option between a completely automatic form
18 of translation or an interactive one or vice versa before beginning
19 the translation, in which, during said interactive translation
20 option, are additionally provided:
 - 21 - means for displaying on a disappearing window on said screen:
 - 22 - the words missing during the word search and
 - 23 - the sentences translated when each sentence translation is
 - 24 complete; and allow their correction and storage;
- 25 characterized in that, during said interactive translation option are
- 26 additionally provided:
 - 27 • means for highlighting and storing a translated sentence word or
 - 28 portion, concerning a possible modification by the operator and

- 1 • means for highlighting and storing the corresponding translated
- 2 sentence word or portion,
- 3 • means for storing a respective behaviour code of said sentence
- 4 word or portion;
- 5 • for integrating said first storage means forming a dictionary of
- 6 words and sentences or sentence portions.

7 **Advantages of the new solution**

8 In this way there is the advantage of giving the operator the
9 possibility of progressively implementing during the same
10 translation not only the missing words or the repetitive and
11 common sentences as in the prior art known systems, but also
12 sentence fragments, which thanks to the respective behaviour
13 code given by the operator will be inserted and suitably be self-
14 modified in the next translation sentence.

15 Thus, thanks to the well known repetitiveness of the expressions in
16 the translation documents, the system automatically and rapidly
17 suits to the new translation field giving, after the first translated
18 text pieces, a resulting maximum translation level and absolutely
19 peerless in quality respect to any known translation system.

20 The tests carried out gave such amazing results that even after only
21 a little translation the errors in each sentence decrease to the
22 minimum almost immediately reaching the average
23 error/sentence value comprised between 1 and 2, for then
24 reaching the error/sentences value >1 .

25 **Preferential variations**

26 The presence of of the following is additionally provided :

27 AA. Means which provide at least three control and input
28 lines:

1 • the first upper one as sentence to be translated/sentence portion
2 corresponding to the correction;
3 • the second one as translated sentence/correct sentence portion;
4 • the third one as a line for inputting the behaviour code
5 corresponding to the correction.
6 • advantageously the presence of a line which by means of a series
7 of numbers indicates how the sentence composition was obtained,
8 for single words and word fragments, thus allowing to let the
9 operator know how the system found the translation sources
10 (single words combined with sentence fragments) is provided.
11 Thus there is the advantage of operating fastly and with the
12 highest speed, having the possibility of carrying out a suitable
13 control before the inputting.

14 **BB.** A translation interface comprising at least two fields
15 vertically scrollable in parallel; adjacent and placed one close to
16 the other, one for the document to be translated and one for the
17 translation, being provided means which:

18 • allow the simultaneous size variation of both fields, one for the
19 text to be translated and one for the translated text, and
20 • keep the two fields at the same height;
21 • scroll the two fields in parallel and simultaneously;
22 • adjust the width of both fields in a proportion inverse to the
23 length of the two documents: original and translation.

24 Thus the great advantage of being able to control and correct the
25 translation by comparing it substantially aligned with the original.

26 **CC.** During the display of an interactive translation window,
27 • A control which, after selecting a sentence word or portion to be
28 translated in the window, enables the consultation of a parallel

1 dictionary which suggests alternative translations of the selected
2 word. Thus giving the operator the possibility of consulting on line
3 a respective consultancy dictionary.

4 • A control for stopping the interactive translation in process,
5 which stores in accumulation in a pair of separate fields

6 • the already translated and corrected part and

7 • the corresponding part of the document which had to be
8 translated,

9 and this is for leaving only what remains of the still untranslated
10 part in the field of the translation in process in order to recover it
11 and the last not yet corrected sentence being translated
12 corresponding to the first sentence of the not yet translated
13 translation part, which at that moment was in the interactive
14 window for the control.

15 It is thus possible to interrupt an interactive translation without
16 losing anything of what was previously translated correctly, and
17 further to intervene in post-correction on the system by acting
18 both on the part still to be translated and on the one just translated.
19 Thus it is possible storing all the corrections made later, allowing to
20 use them again in the next translations.

21 **DD.** Means for performing the post-correction after the text
22 translation, on field of the translation, by means which:

23 • locating the cursor position in the correction area or otherwise if
24 a portion is stored by highlighting, automatically calculate the
25 number of corresponding sentences and words of the translated
26 document from the source and,

27 • on the basis of absolutely maintaining the punctuation positions,
28 they provide in a screen window:

1 • the previously highlighted sentence portion in the correction
2 zone or the concerned whole sentence located by the cursor
3 presence since the last correction and
4 • the corresponding sentence of the document to be translated, in
5 order to allow the operator to: delimit by highlighting the sentence
6 fragment corresponding to the one concerned with the correction
7 and provide a corresponding behaviour code for the storage,
8 substantially in a way similar to what operated during the
9 interactive translation.

10 **EE.** Above said pair of fields, a control bar is provided for the
11 control operations substantially forming a "T"-shaped base
12 interface in which the upper cap of the "T" is the control bar by a
13 combination of buttons and the "T" stem substantially separates the
14 right field from the left field of said pair of fields of the document
15 to be translated and translated document. Thus the whole is
16 combined and integrated in a maximum performance.

17 **FF.** Considering that the scanners are always dissociated
18 from the computer and considering that this is caused by the
19 dimension of the scanner and by the practical impossibility to
20 manipulate sheets within the computer itself, it was thought to
21 associate to the computer itself a scanner integrated in the case of
22 the computer, and to avoid said dimension of the manipulation of
23 the paper sheets to be read, it was innovatively thought to adopt the
24 sideways entry and exit of the paper sheet, the all associated to OCR
25 system for characters recognition.

26 In this way the paper document to be translated is automatically
27 loaded in the machine and in the translation system for eventual
28 control, rectification and following translation.

1 The result of this structure substantially involves the possibility of
2 integrating the scanner with the computer itself and therefore a
3 sensitive improvement of the total time for effecting the
4 translation from a paper document.

5 G G. By using this advantageous and innovative system it is
6 possible to also apply the respective printer on the opposite side of
7 the scanning apparatus.

8 **Description of at least one embodiment of the invention**

9 These and other advantages will appear from the following
10 description of a preferred solution, with the aid of the included
11 drawings, whose details are not to be considered limitative but only
12 given as examples.

13 Figure 1 is a view of the translating computer.

14 Figure 2 is a sectional view of the scanner body inserted in the
15 computer case.

16 Figure 3 is a view with blocks scheme of the computer structure
17 and working system as in previous figures.

18 Fig.4 is a view of the image that appears on the screen during the
19 interactive translation and of the window, for the control,
20 correction and self-learning of the portion concerned with the
21 correction.

22 Fig.5 is a visualization of the completed translation, for the final
23 checking and following eventual post-correction.

24 Figs. from 6 to 9 concern a series of subsequent phases of the
25 translation process in the interactive-automatic way, by using a
26 module in the specific case a bi-directional one recalled by the
27 Multilingual main management system (Fig.4-5) "English-Italian-
28 English", bi-directional module, being there a plurality of these

1 modules according to the possible combinations between the
2 different languages and recalled time by time by the main system,
3 each module being able also to operate singularly without the
4 assistance of the management system or main management.

5 Figure 10 represents one of the cards showing the interactive
6 storage means of the words and sentence fragments that
7 characterize the system.

8 Figure 11 represents the option card for the choice before the
9 translation of the desired work domain, technology, medicine,
10 agriculture, etc.

11 Figure 12 represents the storage device of the new teaching words
12 and sentence fragments encoded during the interactive correction
13 operation.

14 Figure 13 represents the choice device of the work sector divided in
15 a plurality of dominions from 1 to 33 with a customizable optional
16 34 in the specific case the sector 10 (electronics) being selected .

17 In the case of figures 4 and 5 only one sentence was quoted for
18 simplicity, but it is evident that because sliding fields are involved,
19 the document to be translated may be a multipage one.

20 According to the figures and in particular referring to Fig.1 it is
21 noticed that the computer 1 has a desktop parallelepiped-like
22 shaped with frontal entry for disks, CD etc. (11); side entry
23 according to the invention for scanner (12) and respective outlet
24 on the same side (13) of the scanned sheet.

25 The printed sheets exit with feeding of the same paper on the side
26 of the scanner (12) being able be provided on the other side
27 (opposite side) or by feeding by extractable underlying drawer
28 always on the side.

1 The computer 1 obviously is provided of means for realizing a
2 complete operative element with keyboard 2, mouse 3 and monitor
3 or screen 4 both in traditional version and in version "LCD" or
4 other equivalent.

5 The scanner group (122) is integrated in the computer case (1) and
6 is controlled by the push-button (14), and in a simplified version,
7 the paper sheet (P) enters from the side M1 and comes out through
8 the side M2 to then be conveyed by conveying rollers:

9 • in the solution of Fig.1 in exit from the same side by 180° rotation,
10 thus avoiding to make the paper sheet pass under or over the
11 mother card of the processor;

12 • in an alternative solution with exit on the other side, where a
13 printer group for points line of known art having the same
14 substantial shape of the scanner of Fig.2 can be provided.

15 In such a case it is possible, by using the other push-button (15), to
16 load from the scanner side (12) a white paper sheet "P" to make it
17 come out as printed from the opposite side.

18 The printing group is not illustrated as it is of known art and
19 substantially similar to that of the scanner where in the place of
20 the scanning unit (127) a printing unit (e.g. an ink-jet or thermal
21 one) is installed.

22 In particular the scanner group (121) is of the static type and
23 protected in a case (122), and the sheet is made to scroll within it
24 (P) entering into one side (M1) and getting out from the other one
25 (M2).

26 A step motor controlled by the computer (15-PC-CPU) or separate
27 processor ((14-OCR-CPU - 123), is provided for such purpose and it
28 is operated by the control button external to the computer (14).

1 The motor (123) tows by belt 124 respective paper traction rolls
2 (125), placed along bearing transversal axis (125') and operating
3 by idle counter-rolls (1261), on an openable countercase (126) for
4 the inspection and eventual extraction of the jammed sheet during
5 the advancement.

6 A paper-presser 127 is provided in the lower countercase (126) to
7 press the advancing paper against the linear scanning unit of
8 known art (127) that includes the lighting device and the device to
9 send the reading to the respective processor (14-OCR-CPU) or
10 alternatively more simply to the same processor of the computer
11 (15-PC-CPU) where by known OCR program the reading is captured
12 and transformed in text "WP" for the translation or in case of a
13 drawing, stored separately in a scanned documents storing folder
14 (OCR or not).

15 The structure of the new translating computer or translation
16 station or translation desk, therefore preferably includes said
17 characteristics and at least (See Fig.3):

18 - in the desktop parallelepiped case (1):

19 • a central processor (15-PC-CPU) with respective management
20 card and control which is connected to;

21 Memory (RAM 16)

22 Disk fixed memory (17-HDM)

23 Extractable memories such as:

24 - Magnetic memory disks (18-FDD)

25 - Optic memory disks (19-CDD);

26 The whole including at least a system or programme OCR (121 -
27 OCR), and additionally being able and preferably providing a
28 second processor for the separate treatment of the scanning (14-

1 OCR-CPU) which always controls the scanning group (121).

2 Externally, as already said, the processor card (15 - PC-CPU) is
3 linkable to the keyboard (2-KB), mouse (3-MAUS), and Screen (4-
4 DIS).

5 In case of the presence of the second processor "dual processor
6 computer", a processor will serve to the normal translation routine
7 of (15-PC-CPU) and a processor (14 - OCR - CPU) which operates in
8 parallel and is therefore also able to operate on the storage while
9 the translation by the main processor continues.

10 Thus it is possible having work overlaps and while one translates
11 or works with the computer in WP, also doing other work, for
12 example scanning, printing and other.

13 Coming back to Figures from 6 to 9 it can be noticed that, in the
14 specific case the bi-directional module "English-Italian-English" is
15 indicated, able to operate also as "stand alone" and indicated with
16 F1, being there many of these modules, each for language couples
17 combination and having the same configuration with adjacent "T"-
18 like parallel fields couples with the control bar placed on the upper
19 part.

20 Where the control types (always virtual push-buttons) are
21 obviously different.

22 The translation phases with interactive self-learning are the
23 following ones:

24 a1. Introduction of the English text in the left field in the desired
25 way (import, copy and paste, writing or also coming from the
26 automatic scanning system with characters recognition system
27 (121-OCR), choice of the interactive translation mode (total quality)
28 by pushing the button TQ and beginning of the translation;

1 a2. after the automatic translation of the first sentence, said
2 interactive window 46 appears automatically having indicated
3 (Fig.6):

4 - in first line a numbers line that indicates in the specific case that
5 the sentence has been translated word by word ($1*4=4$), not having
6 found prememorized sentences portions (in the case of Fig.4
7 instead the sentence, longer, had the code $1*3+6+1*1+3+3$ that
8 means = the first three words translated singularly, then a 6 words
9 string translated, then a single word and then two strings of 3
10 words each. The puzzle thus made up has given the resulting
11 sentence that as it can be seen is of enough acceptable quality.;

12 - in the second line the sentence being translated;

13 - in the third line the automatically translated sentence to be
14 controlled.

15 a3. The operator carries out the correction of the non appreciated
16 sentence portion (computer system =processing system) that is
17 highlighted (4631 Fig.7);

18 a4. the operator has either the possibility to go on by pushing "OK"
19 (464) or to get out by pressing "Cancel" (465):

20 -if he presses "Cancel" the system either optionally asks if he wants
21 to consult one of the words being translated to supply alternatives
22 of translation or it stops the translation by accumulating the
23 translated in accumulator;

24 - if he presses "OK" the window of Fig.8 appears in which it can be
25 seen that in line 2 only the correct sentence fragment appears and
26 he asks to adapt the correspondent original sentence portion
27 accordingly to line 2, proposing in third line a qualification code;

28 a5. By highlighting the portion, corresponding fragment of the

1 sentence being translated (4621) on the first line and by pushing
2 "OK" (Fig.9),

3 a6. Fig.10 appears where on three lines the operator must check
4 the teaching (4621-4631), in the specific case he corrects from
5 "sofs" (automatically supplied by the processor because it ends with
6 "a") = singular feminine noun in "soms" = singular masculine noun
7 (4632), and by pushing "OK" (464), the teaching is automatically
8 stored in the interactive memory (FM Fig.12), that includes:

9 - the field of the first fragment word for the research (FM1), the
10 field of the fragment portion following the first word (FM2), the
11 field of the translation (FM3, the field of the behaviour code (FM4),
12 being further provided a personalization field (FM5), in function
13 of the chosen sector or work domain (DM);

14 a7 Fig.11, the completely and perfectly translated and controlled
15 sentence appears in the left field and the interactive window
16 appears again proposing to the translator the control of the next
17 sentence and so on.

18 With this system it was found:

19 - a practically perfect translation controlled by the operator;
20 - a progressive teaching of the sentence fragments concerning the
21 corrections avoiding the computer to repeat the previous errors;
22 - the translation time is greatly reduced, going over 50% and with
23 maximum quality.

24 In case in the Tq="total Quality" system, no more substantial errors
25 were found (as for example the repetition of good translations as
26 from window of Fig>.11, it will be possible to opt for the automatic
27 translation and post-correction ="postediting", in which always
28 with the same method it will be possible to memorize the respective

1 corrections.

2 In the preferential solution the scanner (121) is substantially
3 placed on the side and arranged for a sheet path substantially
4 around of the scanning head (127), being the sheet in scanning (P)
5 obliged to follow a substantially "C"-like path for entering into and
6 getting out from the same side d, on the computer side, turning
7 around the scanning head (127). In this way there is the very great
8 advantage, of being able to extract the central body of the
9 scanning group (122) that to such purpose is laterally enclosed
10 within the "C" -like housing (126), for easily carrying out the
11 maintenance and extracting an eventually jammed sheet.

12 In fact the computer is characterised in that said scanner group
13 (121) is substantially made up of a substantially "C" -like case as
14 paper guide (P), external (126), where the internal group (122)
15 containing the reading head (127) and the paper advancement
16 system (123-124/124'/124"-125) is inserted and laterally extractable.

1 Claims

2 1. A Machine translation system using a computer translator of the
3 type in which is provided the prearrangement of:

4 - first storage means of words and strings of more words with
5 respective correct translations forming a dictionary of words and
6 sentences or sentence portions;

7 - second means to receive and store a text to be translated in a
8 screen field or second storing means (4-45-455) and

9 - third means to store the translated text in a second screen field or
10 third storing means (456);

11 - fourth means to find in progression the words of the text to be
12 translated and compare them with the words of said first means to
13 obtain a progressive translation and:

14 - means to opt from a completely automatic kind of translation to an
15 interactive translation or vice versa, before beginning the
16 translation,

17 in which :

18 during said interactive translation option, the following are
19 further provided:

20 - means to display in a display window (46) on said screen (4):

21 - the words lacking during the research of the words and

22 - the translated sentences at the completion of the translation of
23 each sentence; and allow their correction and storage;

24 characterised in that, during said interactive translation option,
25 the following are further provided:

26 - means to highlight (F2) and store a translated word or sentence
27 portion (4631), concerning an eventual change of the operator and

28 - means to highlight and store the corresponding word or sentence

1 portion (F4-4621) of the sentence to be translated (462), and
2 - means to memorize a respective behaviour code (F5-4632) of said
3 translated word or sentence portion (4631);
4 to integrate said first storage means forming a dictionary of words
5 and sentences or sentence portions (FM; FM1,FM2,FM3,FM4,FM5).
6 2. Translation system according to claim 1. characterised in that in
7 said interactive window (46) at least three sentences
8 lines/fragments or control and input strings are provided:
9 - the first as a fragment (4621) of the sentence to be translated
10 (462) corresponding to the correction made (4631);
11 - the second as a portion concerning the correction of the
12 translated sentence (4631);
13 - the third as behaviour code (4632) corresponding to the portion
14 concerning the correction (4631).
15 3. Translation system according to any of the preceding claims
16 where in said interactive window (46), a line representing a series
17 of numbers (461) is further provided, in which the number are
18 represented in logic succession, with:
19 - traits of single words translation $(1*n) +$
20 - traits of words sets translation $(n)+$.
21 4. Translation system according to any of the preceding claims,
22 characterised in that it includes a translation interface (45) that
23 includes at least two fields (455-456) vertically scrollable in
24 parallel (4511-4561); adjacent and placed side-by-side, one for the
25 document to be translated (455) and one for the translation (456),
26 being provided means that:
27 - allow the contemporary variation of both fields dimension, one
28 for the text to be translated and one for the translated text, and

- 1 - maintain the said two fields at the same height;
- 2 - scroll the two fields parallel and simultaneously;
- 3 - proportion the width of both fields in inverse proportion to the
- 4 length of the two documents: original and translation.
- 5 5. Translation system according to any of the preceding claims
- 6 characterized in that during the exposition of the interactive
- 7 translation window (46), are further provided:
- 8 - control means that, after selection of a word of the sentence or
- 9 portion to be translated in window, activates the consultation of a
- 10 parallel dictionary that suggests alternative translations of the
- 11 selected word., thus giving the operator the possibility to consult
- 12 on line a respective consultation dictionary;
- 13 - stop control means of the interactive translation in course, which
- 14 stores in accumulation, in separate couple of fields:
- 15 - the part already translated and corrected and
- 16 - the corresponding part of the document that had to be
- 17 translated,
- 18 6. Translation system according to any of the preceding claims
- 19 characterised in that means for carrying out the post-correction
- 20 after translation of the text, on the field of the translation, are
- 21 further provided means that:
- 22 - determining the position of the cursor in the correction area or
- 23 otherwise if a portion is stored by highlighting, calculate
- 24 automatically the number of the corresponding sentences and
- 25 words of the translated document, from the origin and,
- 26 - on the base of an absolute maintenance of the punctuation
- 27 positions, supply in a screen window:
- 28 - the sentence portion previously highlighted in the

1 correction area or the whole concerned sentence located from
2 presence of the cursor since the last correction and
3 - the corresponding sentence of the document to be translated, in
4 order to allow the operator to: delimit by highlighting the sentence
5 fragment corresponding to the one concerned by the correction
6 and supply a corresponding behaviour code for the storage, in way
7 substantially similar to that used during the action of the
8 interactive translation.

9 7. Translation system according to any of the preceding claims
10 characterised in that above said fields couple (455-456), a controls
11 bar (451, 452, 454,) is provided for the control operations
12 forming substantially a "T"-like base interface in which the upper
13 cap of the "T" is the controls bar which by the association of virtual
14 buttons (451, 452, 454,), and the shank of the "T" substantially
15 divides the right field (456) from the left field (455) of said fields
16 couple of the document to be translated and translated document.

17 8. Translation system according to any of the preceding claims
18 characterised in that the teaching (F5: 4621-4631-4632) is
19 automatically stored in the interactive memory (FM), that includes:

- 20 - a field of the first word of the sentence fragment, for the
21 research (FM1),
22 - a field of the sentence fragment portion following the said first
23 word (FM2),
24 - a translation field for the whole fragment (FM3),
25 - a behaviour code field (FM4),
26 - a field of personalization (FM5), in function of the selected sector
27 or work domain (DM) being further provided;

28 9 . A computer (1), able to operate as a machine translator as per

1 previous claims, characterised in that:

2 - a scanner means (121) is inserted in its case, said computer case
3 having an entry of the paper to be scanned (P) placed on the side
4 (12) respect to the front (11),

5 - the computer or scanner being associated/associable to OCR
6 system for characters recognition.

7 10. A computer (1), able to operate as a machine translator as per
8 previous claims, characterised in that it has also integrated in its
9 case (1) a printer with side exit of the printed paper (13).

10 11. A translator bench, able to operate as a machine translator
11 with a computer, scanner and eventually printer, and a translation
12 system/method as per previous claims.

13 12. A computer (1), able to operate as a machine translator as per
14 previous claims, characterised in that it comprises a scanner (121)
15 substantially arranged on the side and arranged for a sheet path
16 substantially around the scanning head (127), being the sheet in
17 scanning (P) obliged to follow a substantially "C"-like path for
18 entering into and getting out from the same side, on the computer
19 side, turning around the scanning head (127).

20 13. A computer (1), able to operate as a machine translator as per
21 previous claims, characterised in that said scanner group (121) is
22 substantially made up of a substantially "C"-like case as a paper
23 guide (P), external (126), where the internal group (122)
24 containing the reading head (127) and the paper advancement
25 system (123-124/124'/124"-125 is inserted and extractable.

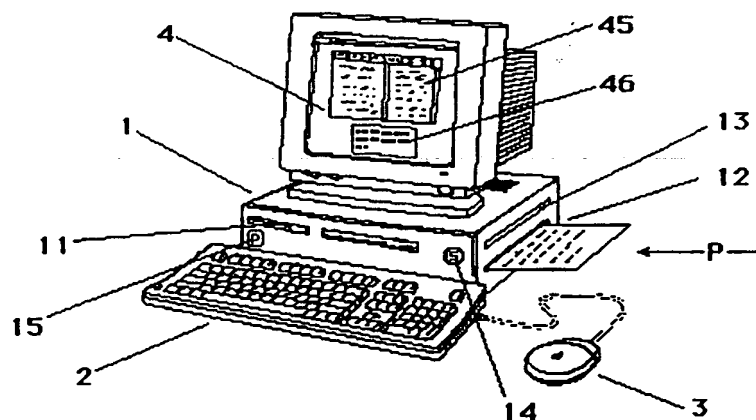


FIG. 1

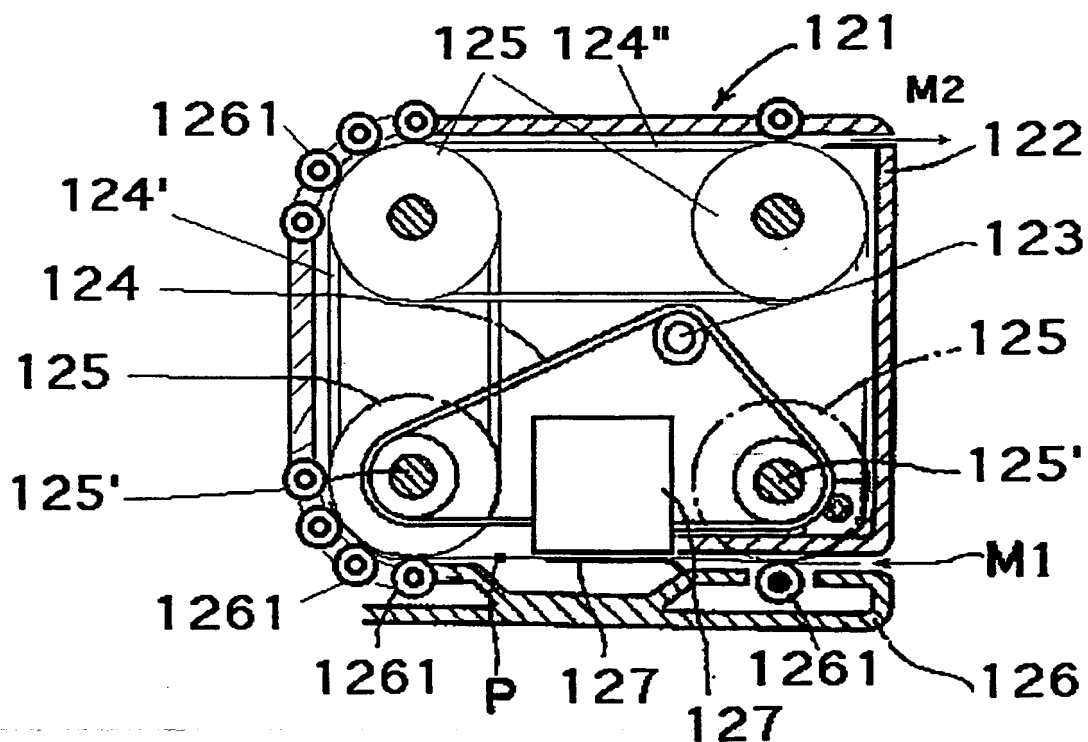


FIG. 2

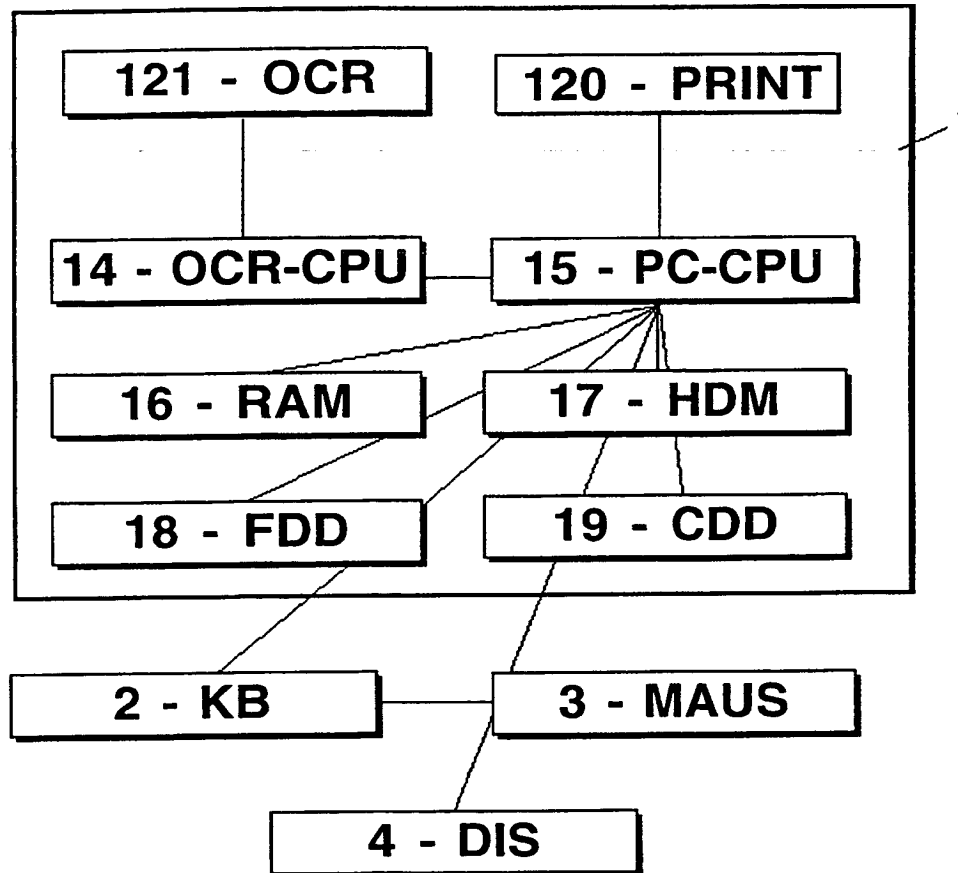


FIG. 3

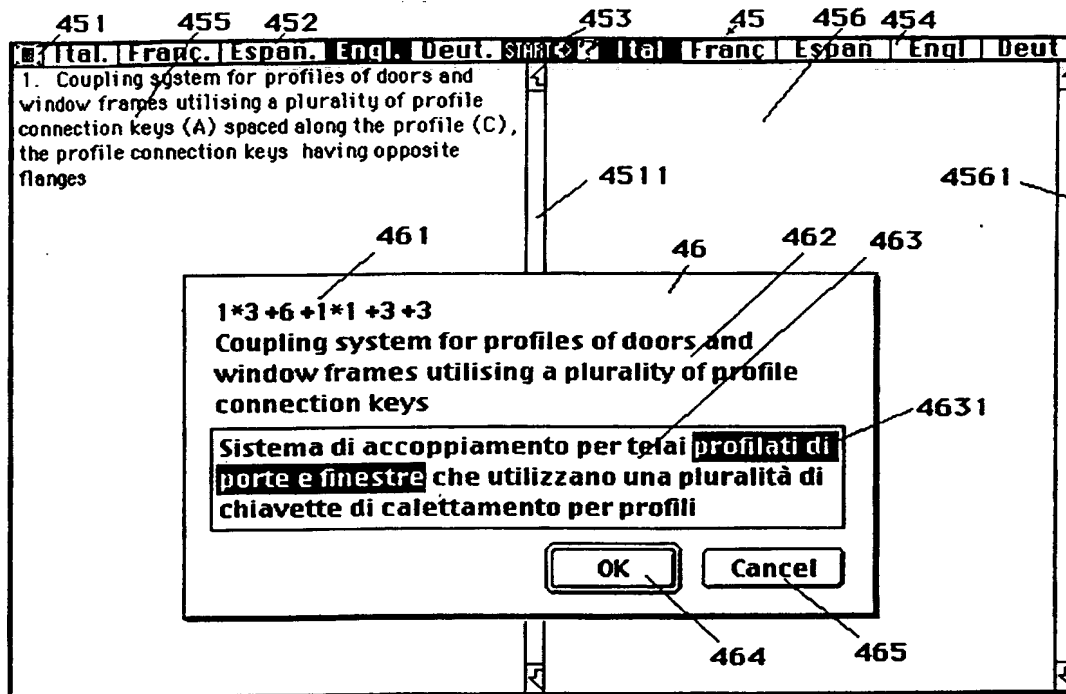


FIG. 4

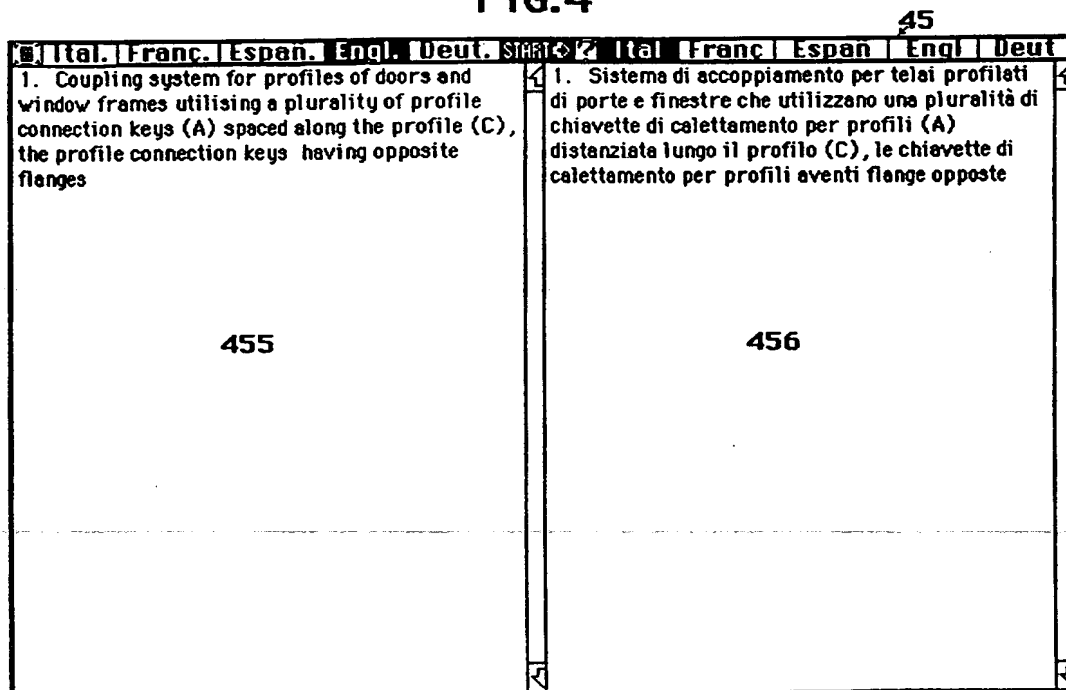


FIG. 5

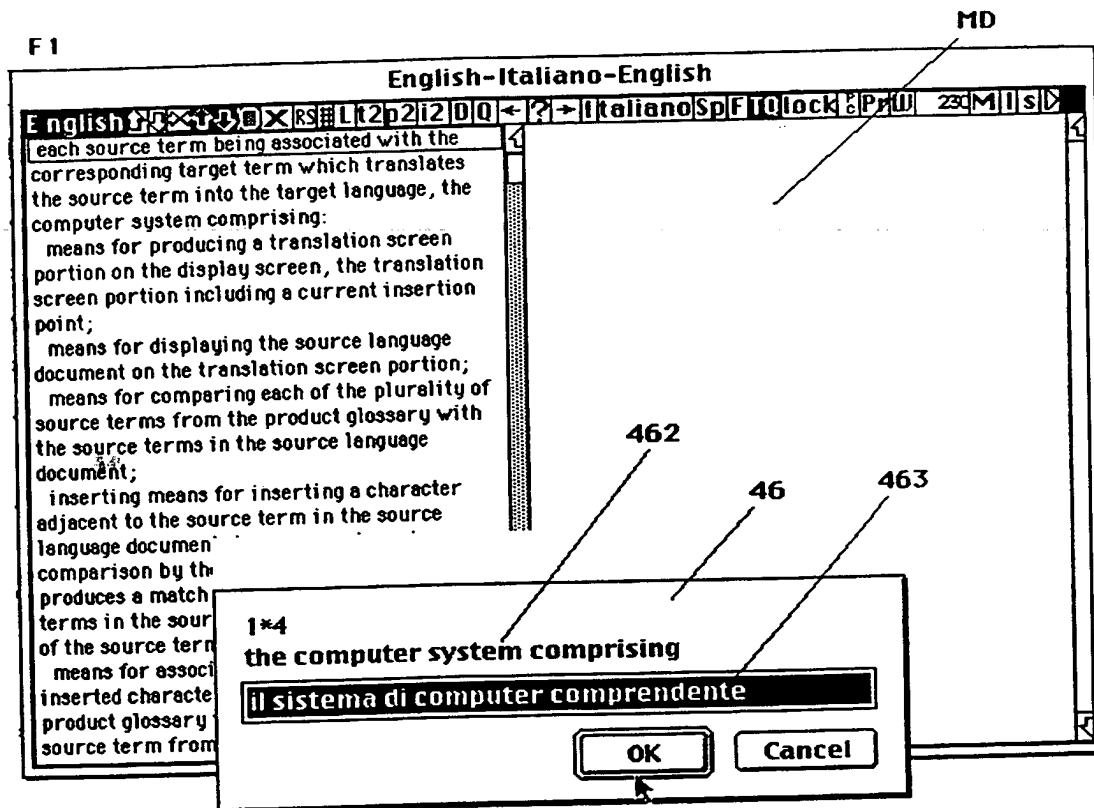


FIG.6

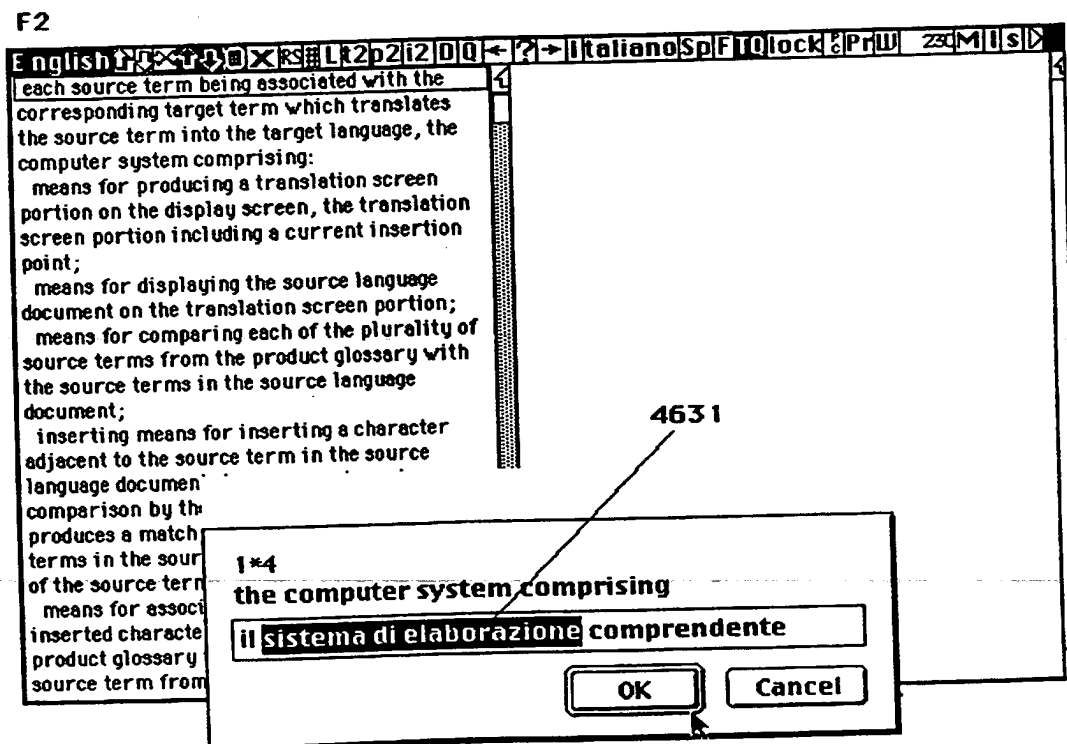


FIG.7

F3

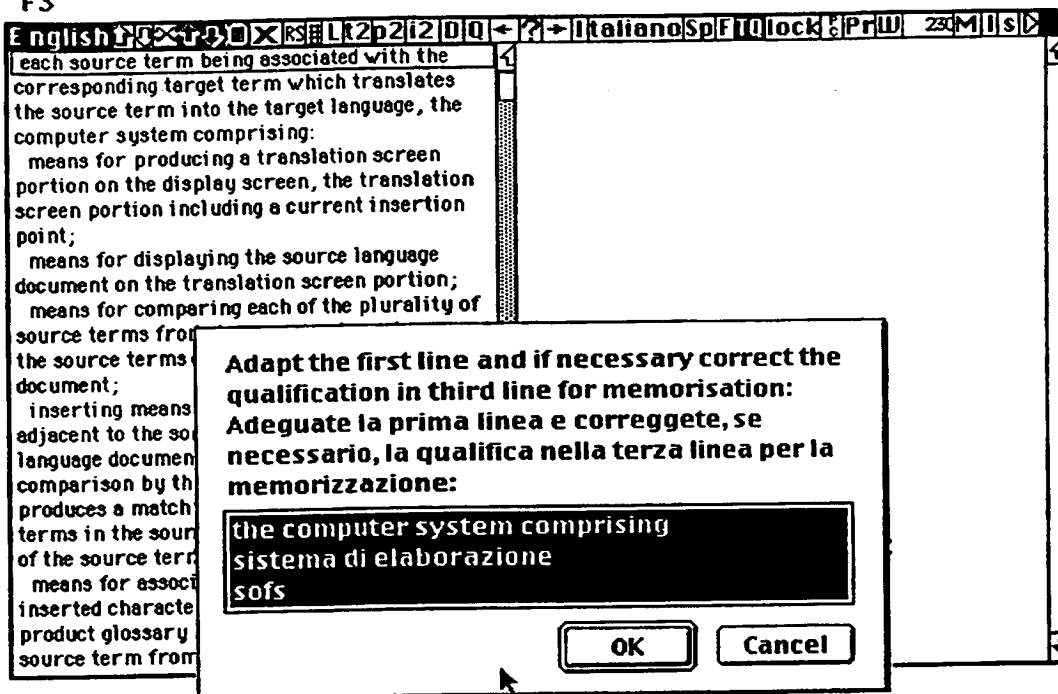


FIG.8

F4

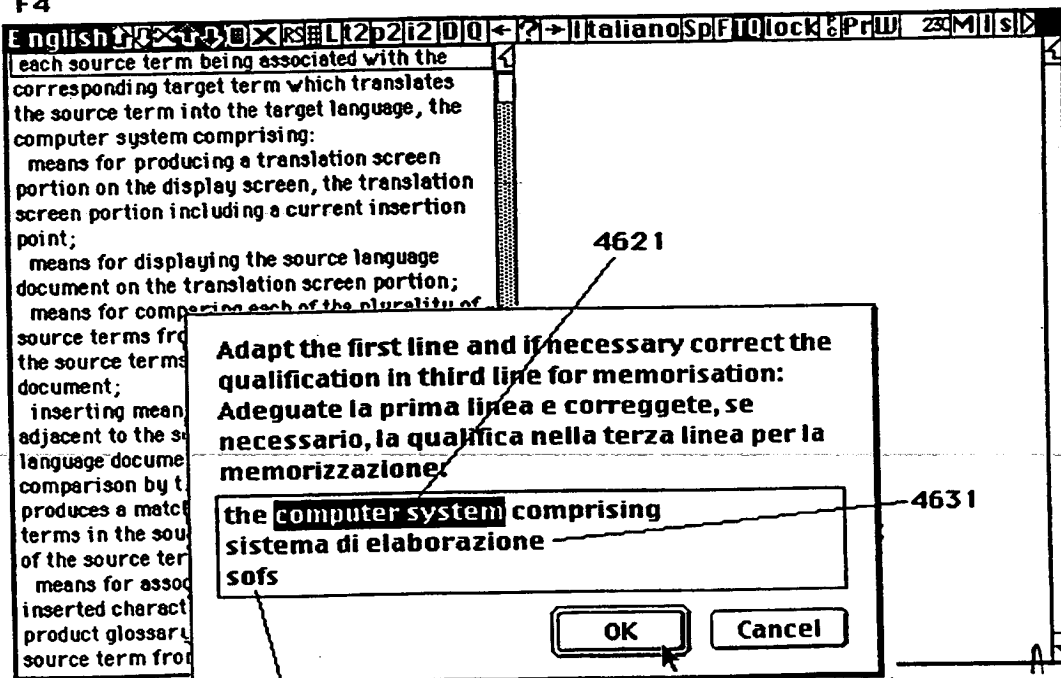


FIG.9

F5

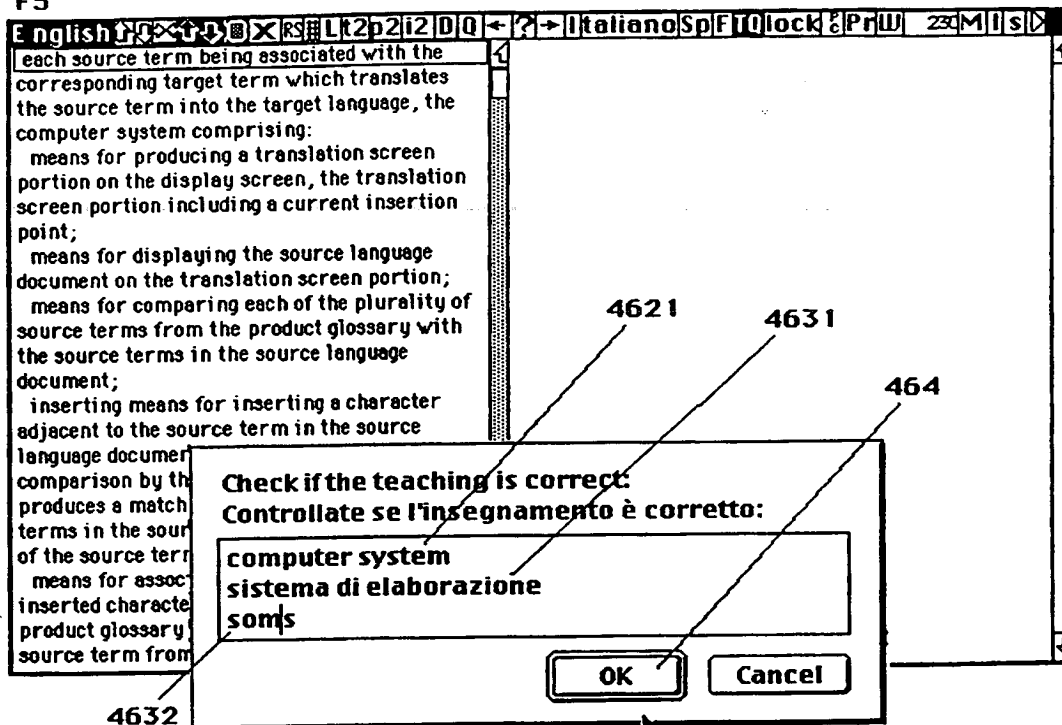


FIG. 10

F6

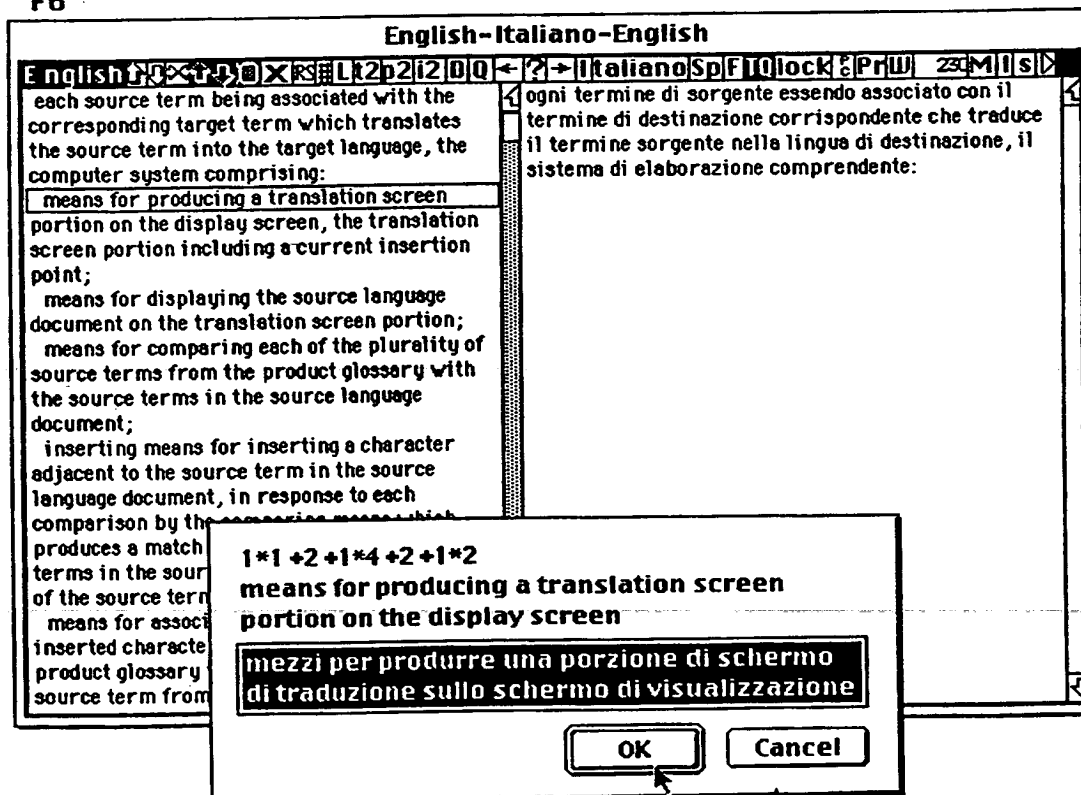


FIG. 11

7/7

English-Italiano-English					
NewCard					
autorevision codificatore					
split					
English	five	size	CLICK ONLY for line selection		
means	authority on the matter by the name of in the art world technique	autorità riconosciuta in materia nota con nome di nota nella tecnica tecnica nota mondo conosciuto tecnica nota	sofs .021031 vertpass14 vertpar sofs soms fr	FM5? @26-11-1997	
FM1	FM2	FM3	FM4		
which	instrument neither pleases nor dis instruments did not play well may be regenerated in situ affords the advantage of enabling will ensure beneficial electrical ins	quale strumento ne piace ne dispiace quali strumenti non suonarono bene che possono essere rigenerati in situ che possono essere formati in situ ciò offre il vantaggio di render possibile ciò assicurerà un isolamento elettrico gioveve	fr .758451 fr fr fr fr		
heavy	reversing machinery media separation metal compounds fall penalties cropper	macchinario pesante con inversione di marcia separazione con torbida pesante composti di metalli pesanti forte caduta gravi pene di buona resa	soms .0003131 sofs somp sofs sofp agl	@24-12-1997 @10-10-1996 @23-02-1998 @20-11-1997 @11-11-1997	
spiro	ring system hydrocarbons	spiro-composto spiro idrocarburi	soms .000111 somp avv somp .000011 avv	@17-12-1996	
poly-	alkanes	poli-alcani	avv somp .002371		
vinyl	acetic acid esters	esteri di acido vinilacetico	verbinfon .00010 verbinfon soms soms .000101 verbinfon soms sofs .000601 soms	@6-09-1997 @6-09-1997 @6-09-1997 @6-09-1997 @6-09-1997	
clang	the bell	scampellare			
clank	of chains	sferagliare, fragore rumore delle catene			
clash	of styles of ideas	sferagliare, rumore metallico collisione di stili scontro di idee			

FIG. 12

DM

English-Italiano-English	
CheckSector FILTERS-FILTRI-FILTRES-FILTER-FILTROS	
1 <input type="checkbox"/> Vehicles-Veicoli-Véhicules-Fahrzeuge Vehulos	18 <input type="checkbox"/> Editing-Editoria-Editions-Edition-Verlagswesen Edición
2 <input type="checkbox"/> Railways-Ferroviano-Chemin de fer Eisenbahn-Ferrocarril	19 <input type="checkbox"/> Military-Militare-Militaire-Militär-Militar
3 <input type="checkbox"/> Marine-Marina	20 <input type="checkbox"/> Nuclear-Nucleare-Nucléaire-Kernkraft
4 <input type="checkbox"/> Aerospace-Aerospaziale-Aérospatiale Luftfahrt/Raumfahrt-Aerospacial	21 <input type="checkbox"/> Music-Musica-Musique-Musik
5 <input type="checkbox"/> Technology-Tecnologia-Technique-Technik	22 <input type="checkbox"/> Legal-Legale-Droit-Recht-Derecho
6 <input type="checkbox"/> Metallurgy-Metallurgia-Metallurgie- Metalurgia	23 <input type="checkbox"/> Accounting-Contabilità-Comptabilité-Buchhaltung Contabilidad
7 <input type="checkbox"/> Mining-Minerario-Minières-Bergbau-Mineras	24 <input type="checkbox"/> Business&Correspondence/Mail-Commerciale- Commerce-Handel-Comercio
8 <input type="checkbox"/> Building-Edilizia-Construction-Bauwesen- Construccion	25 <input type="checkbox"/> Man-Uomo-Homme-Mensch-Hombre
9 <input type="checkbox"/> Electricity-Elettricità-Electricité-Elektrik- Electricidad	26 <input type="checkbox"/> Food-Alimentazione-Alimentation-Essen Alimentación
10 <input checked="" type="checkbox"/> Electronics-Elettronica-Electronique- Elektronik-Electrónica	27 <input type="checkbox"/> Medicine-Medicina-Medizin
11 <input type="checkbox"/> Informatics-Computer-Informatique-EDV- Informatica	28 <input type="checkbox"/> Religion-Religione
12 <input type="checkbox"/> Telecommunications-MAIL-Telecomunicaciones- Telekommunikation-Telecomunicaciones	29 <input type="checkbox"/> Insurance-Assicurazioni-Assurance-Versicherungen Seguros
13 <input type="checkbox"/> Textile-Tessile-Textilien/Wearing	30 <input type="checkbox"/> Banking-Bancario-Bancaire-Banken
14 <input type="checkbox"/> Film-Fotocinematografia-Cinéphotographie- Kino/Photo	31 <input type="checkbox"/> Animals-Animali-Animaux-Tiere-Animales
15 <input type="checkbox"/> Sport	32 <input type="checkbox"/> Biology-Biologia-Biologie
16 <input type="checkbox"/> Chemistry-Chimica-Chimie-Chemie-Química Phisics-Fisica-Physik-Physique	33 <input type="checkbox"/> Vegetals-Vegetali-Pflanzen-Vegetal
17 <input type="checkbox"/> Agriculture-Agricoltura-Landwirtschaft- Agriculture	34 <input type="checkbox"/> Optional-NachWahl-Opzionale-Opcional: ?

FIG. 13

INTERNATIONAL SEARCH REPORT

Internat'l Application No

PCT/IT 99/00040

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06F17/28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 349 368 A (TAKEDA KIMIHITO ET AL) 20 September 1994 see abstract; claims 1-8 see column 2, line 15 - line 26 see column 7, line 11 - column 9, line 49; figures 7-12 ---	1-8
A	EP 0 176 858 A (SHARP KK) 9 April 1986 see abstract; claims 1-5 see page 16, line 1 - page 29, line 6; figures 6-22 ---	1-8
A	US 5 257 187 A (SUZUKI HITOSHI ET AL) 26 October 1993 see abstract see column 3, line 1 - column 4, line 47; figures 4-6 ---	1-8
-/--		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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- "P" document published prior to the international filing date but later than the priority date claimed

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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

3 May 1999

Date of mailing of the international search report

12/05/1999

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Fax: (+31-70) 340-3016

Authorized officer

Suendermann, R

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IT 99/00040

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 101 349 A (TOKUUME YOSHIHIRO ET AL) 31 March 1992 see abstract see column 2, line 10 - column 25 ---	1-8
A	FR 2 659 461 A (KIS FRANCE SA ;CRASNIANSKI SERGE (FR)) 13 September 1991 see abstract ---	9-13
A	US 5 063 508 A (YAMADA YOSHIMI ET AL) 5 November 1991 see abstract see column 2, line 10 - line 25 -----	9-13

INTERNATIONAL SEARCH REPORT

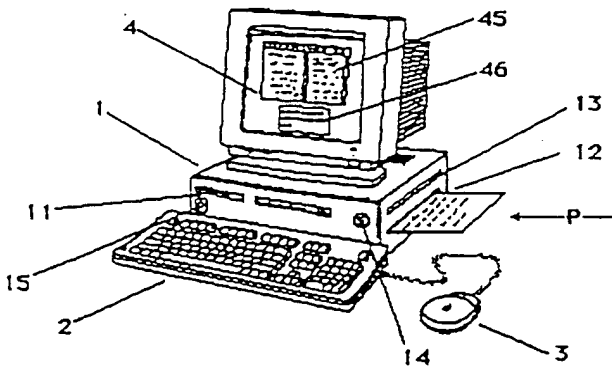
Information on patent family members

International Application No

PCT/IT 99/00040

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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US 5063508	A	05-11-1991	JP 2249064 A	04-10-1990

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 17/28	A1	(11) International Publication Number: WO 99/45476 (43) International Publication Date: 10 September 1999 (10.09.99)
<p>(21) International Application Number: PCT/IT99/00040</p> <p>(22) International Filing Date: 19 February 1999 (19.02.99)</p> <p>(30) Priority Data: UD98A000032 3 March 1998 (03.03.98) IT</p> <p>(71) Applicant (for all designated States except US): D'AGOSTINI ORGANIZZAZIONE S.R.L. [IT/IT]; Via G. Giusti, 17, I-33100 Udine (IT).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): D'AGOSTINI, Giovanni [IT/IT]; Via G. Giusti, 17, I-33100 Udine (IT).</p> <p>(74) Agent: D'AGOSTINI, Giovanni; D'Agostini Organizzazione s.r.l., Via G. Giusti, 17, I-33100 Udine (IT).</p>		<p>(81) Designated States: AU, BR, CA, CN, CU, JP, MX, RU, US, VN, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published With international search report.</p>
<p>(54) Title: A TRANSLATION SYSTEM AND A MULTIFUNCTION COMPUTER, PARTICULARLY FOR TREATING TEXTS AND TRANSLATION ON PAPER</p> <div data-bbox="548 1201 1156 1564"></div> <p>(57) Abstract</p> <p>Computer for text treatment and machine translation system and translator, of the type in which the prearrangement is provided: first means for storing words and strings of more words with respective correct translations forming a dictionary of words and sentences or sentence portions; second means for receiving a text to be translated in a screen field (4-45-455); and third means for storing the translated text in a second screen field (456); fourth means for searching in progression the words of the text to be translated and compare them with the words of said first means to obtain a progressive translation and: means to opt from a completely automatic translation form to an interactive translation or vice versa, before beginning the translation, in which, during said option of interactive translation, are further provided: means to display in a disappearing window (46) on said screen (4); the words lacking during the research of the words and the translated sentences at the completion of the translation of each sentence; and allow the correction and storage; the translation apparatus involving a scanner integrated in it with OCR for the side direct loading of the sheets to be translated (P-12-13).</p>		

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☐ AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
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- ☐ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

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| <input type="checkbox"/> AL Albania | <input type="checkbox"/> LS Lesotho |
| <input type="checkbox"/> AM Armenia | <input type="checkbox"/> LT Lithuania |
| <input type="checkbox"/> AT Austria | <input type="checkbox"/> LU Luxembourg |
| <input checked="" type="checkbox"/> AU Australia | <input type="checkbox"/> LV Latvia |
| <input type="checkbox"/> AZ Azerbaijan | <input type="checkbox"/> MD Republic of Moldova |
| <input type="checkbox"/> BA Bosnia and Herzegovina | <input type="checkbox"/> MG Madagascar |
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| <input type="checkbox"/> BG Bulgaria | <input type="checkbox"/> MN Mongolia |
| <input checked="" type="checkbox"/> BR Brazil | <input type="checkbox"/> MW Malawi |
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| <input type="checkbox"/> CZ Czech Republic | <input type="checkbox"/> RO Romania |
| <input type="checkbox"/> DE Germany | <input checked="" type="checkbox"/> RU Russian Federation |
| <input type="checkbox"/> DK Denmark | <input type="checkbox"/> SD Sudan |
| <input type="checkbox"/> EE Estonia | <input type="checkbox"/> SE Sweden |
| <input type="checkbox"/> ES Spain | <input type="checkbox"/> SG Singapore |
| <input type="checkbox"/> FI Finland | <input type="checkbox"/> SI Slovenia |
| <input type="checkbox"/> GB United Kingdom | <input type="checkbox"/> SK Slovakia |
| <input type="checkbox"/> GD Grenada | <input type="checkbox"/> SL Sierra Leone |
| <input type="checkbox"/> GE Georgia | <input type="checkbox"/> TJ Tajikistan |
| <input type="checkbox"/> GH Ghana | <input type="checkbox"/> TM Turkmenistan |
| <input type="checkbox"/> GM Gambia | <input type="checkbox"/> TR Turkey |
| <input type="checkbox"/> HR Croatia | <input type="checkbox"/> TT Trinidad and Tobago |
| <input type="checkbox"/> HU Hungary | <input type="checkbox"/> UA Ukraine |
| <input type="checkbox"/> ID Indonesia | <input type="checkbox"/> UG Uganda |
| <input type="checkbox"/> IL Israel | <input checked="" type="checkbox"/> US United States of America |
| <input type="checkbox"/> IN India | <input type="checkbox"/> UZ Uzbekistan |
| <input type="checkbox"/> IS Iceland | <input checked="" type="checkbox"/> VN Viet Nam |
| <input checked="" type="checkbox"/> JP Japan | <input type="checkbox"/> YU Yugoslavia |
| <input type="checkbox"/> KE Kenya | <input type="checkbox"/> ZW Zimbabwe |
| <input type="checkbox"/> KG Kyrgyzstan | |
| <input type="checkbox"/> KP Democratic People's Republic of Korea | |
| <input type="checkbox"/> KR Republic of Korea | |
| <input type="checkbox"/> KZ Kazakhstan | |
| <input type="checkbox"/> LC Saint Lucia | |
| <input type="checkbox"/> LK Sri Lanka | |
| <input type="checkbox"/> LR Liberia | |

Check-boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 3-03-1998 3 MARCH 1998	UD98A000032	ITALY		
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):
ISA /	Date (day/month/year) Number Country (or regional Office) 10-08-1998 RS 100827 IT EPO DEN HAAG

Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets: request : 3 description (excluding sequence listing part) : 25 claims : 5 abstract : 1 drawings : 7 sequence listing part of description : Total number of sheets : 41	This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input checked="" type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input checked="" type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input checked="" type="checkbox"/> other (specify): copy payment of the fees
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Figure of the drawings which should accompany the abstract: 1	Language of filing of the international application: ENGLISH
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Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

Udine

February 15, 1999

The agent

D'Agostini, Giovanni

For receiving Office use only

1. Date of actual receipt of the purported international application:	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

For International Bureau use only

Date of receipt of the record copy
by the International Bureau: